DOCUMENT RESUME

ED 414 251 SP 037 648

AUTHOR	Lapan, Stephen D., Ed; Minner, Sam, Ed.
TITLE	School-University Partnerships. Perspectives: Center for Excellence in Education, Monograph Series No. 4.
INSTITUTION	Northern Arizona Univ., Flagstaff. Center for Excellence in Education.
PUB DATE	1997-00-00
NOTE	96p.
PUB TYPE	Collected Works - General (020)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*American Indian Education; *College School Cooperation; Elementary Secondary Education; Field Experience Programs; Higher Education; *Mentors; Navajo (Nation); *Preservice Teacher Education; Public Schools; Reflective Teaching; Rural Schools; Special Education Teachers; Student Teaching; *Teacher Education Programs
IDENTIFIERS	*Northern Arizona Univ Center Excellence in Educ

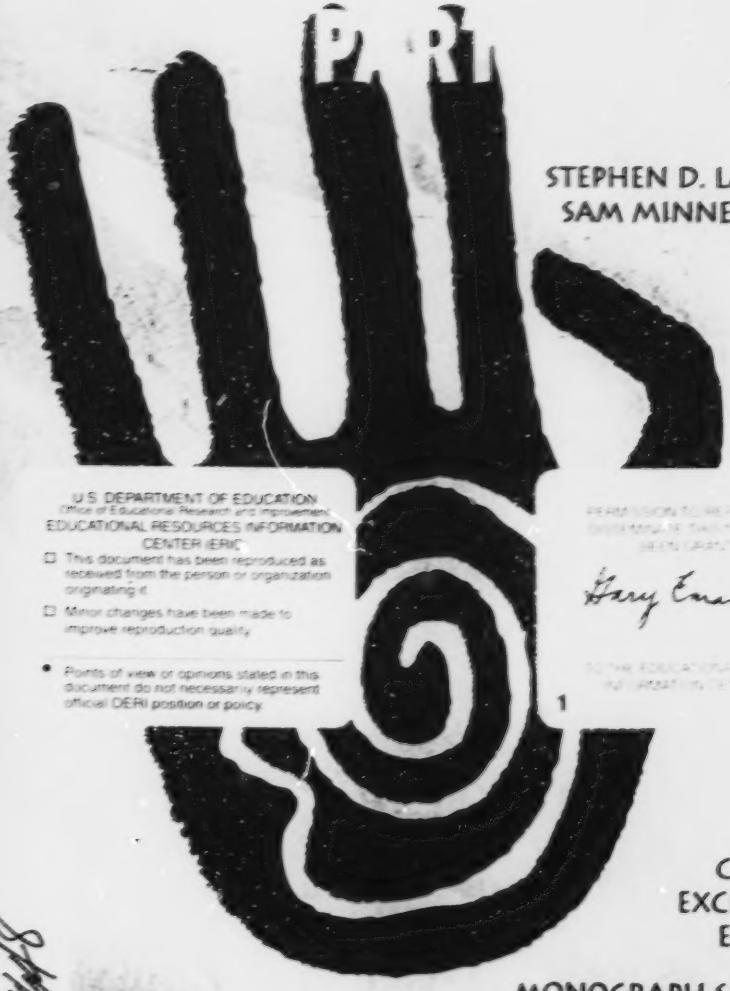
ABSTRACT

This monograph features four papers that highlight school-based teacher training programs through Northern Arizona University's (NAU) Center for Excellence in Education (CEE). The first paper, "Reflection, Research, and Practice in a School-based Teacher Education Program (Peggy Ver Velde, Sherry L. Markel, Jeanne Dustman, Barbara Campbell, and Mary Knight), outlines the history, operation, and evaluation of the pioneer CEE school-university teacher training program, Flagstaff Partnerships Program. This K-6 effort emphasized curriculum integration translated into lessons taught by college students as they progressed toward student teaching. The second paper, "An Elementary School-based Partnership: The Mentorship Component" (Pat Wall, Emilie Rodger, Martha Brady, and MaryAnn Davies), describes the NAU/Sedona Partnership Program, a K-8 teacher preparation partnership involving CEE and the Sedona, Arizona Unified School District, focusing on the program's mentorship aspect. The third paper, "Integrated Secondary Teacher Education Program: On the Edge of Partnership" (Daniel L. Kain, Michael Tanner, and Peggy Raines), describes a secondary partnership program developed because NAU had exemplary innovative elementary school-based teacher preparation but very little innovative secondary preparation. The fourth paper, "Preparing Special Education Teachers for Rural Areas: The Rural Special Education Project" (Greg Prater, Susan Miller, and Sam Minner), describes a partnership on a Navajo reservation whose primary goal was to increase the number of qualified educators to teach Native American children in rural and reservation areas. (All papers contain references). (SM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

PERSPECTIVES

ED 414 251



STEPHEN D. LAPAN AND
SAM MINNER, EDITORS

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CENTER FOR
EXCELLENCE IN
EDUCATION

MONOGRAPH SERIES NO. 4

NORTHERN ARIZONA UNIVERSITY • FLAGSTAFF, ARIZONA

BEST COPY AVAILABLE

PERSPECTIVES

SCHOOL-UNIVERSITY PARTNERSHIPS

STEPHEN D. LAPAN AND SAM MINNER
EDITORS

A CENTER FOR EXCELLENCE IN EDUCATION MONOGRAPH
NORTHERN ARIZONA UNIVERSITY
FLAGSTAFF, ARIZONA

PERSPECTIVES

Center for Excellence in Education
MONOGRAPH SERIES

NUMBER

1. The Meaning of Intelligence: Implications for Gifted Education
   Stephen D. Lapan

2. International Education and the Search for Human Understanding
   Dickson Mungazi

3. Dimensions of Diversity
   Stephen D. Lapan and Sam Minner, Editors

4. School-University Partnerships
   Stephen D. Lapan and Sam Minner, Editors

NAU is an Equal Opportunity/Affirmative Action Institution
Publication Services/G21455

MONOGRAPH SERIES EDITORIAL BOARD

Tom Fetsco

Daniel L. Kain

Ramona Mellott

Susan Miller

Peggy Raines

EDITORIAL ASSISTANTS

Gloria Delany- Barmann

Debbie Hawthorne

TABLE OF CONTENTS

	Page
Foreword	vii
Reflection, Research, and Practice in a School-based Teacher Education Program - Peggy Ver Velde, Sherry L. Markel, Jeanne Dustman, Barbara Campbell, and Mary Knight	1
An Elementary School-based Partnership: The Mentorship Component - Pat Wall, Emilie Rodger, Martha Brady, and MaryAnn Davies[1]	23
Integrated Secondary Teacher Education Program: On the Edge of Partnership Daniel L. Kain, Michael Tanner, and Peggy Raines[1]	39
Preparing Special Education Teachers For Rural Areas: The Rural Special Education Project - Greg Prater, Susan Miller, and Sam Minner	73
About the Authors	84

[1] These authors were listed in this order by random choice. No sequence is implied.

6

FOREWORD

For many years the public and the education community have speculated about the quality and relevance of teacher preparation. These concerns motivated colleges of education to carefully examine their programs and to seriously consider new ways to organize pre-service efforts.

One effective response to questions of quality and relevance has been school-university partnership teacher preparation programs that emphasize field-based teaching experiences and cooperative training offered by successful practitioners and college faculty. While these partnership plans date back to the 60s where they provided an attractive alternative to university laboratory schools, their presence has increased remarkably in the last decade.

The Center for Excellence in Education (CEE) at Northern Arizona University (NAU) recognized the significance of school-based teacher training by making its first commitment to the partnership model more than ten years ago. Since that time, CEE has developed and supported several of these educational ventures. The focus of this monograph is on four of these programs including the first project involving elementary children, a similar but unique elementary program at another location, a partnership with secondary schools, and a rural school-based training program on the Navajo Reservation.

In the first article, authors Ver Velde, Markel, Dustman, Campbell, and Knight outline the history, operation, and evaluation of the pioneer CEE school-university teacher training program (Flagstaff Partnership Program) started in 1985 with the Flagstaff, Arizona Unified School District. This effort involving K-6 children emphasized curriculum integration translated into lessons taught by college students as they progressed toward student teaching. The reader should take special note of the learning environment created for the pre-service students as they are given the opportunity and support to use feedback and reflect on their practice. This program gave special attention to the equal involvement of practitioners and college faculty in both its planning and implementation.

In the second article, Wall, Rodger, Brady, and Davies describe a teacher preparation partnership enterprise involving children in K-8 grades. They have chosen to focus on the mentorship aspect of the NAU/Sedona Partnership Program which allows the reader an opportunity to examine in detail how mentoring can operate effectively in the training of teachers. This program was initiated in 1993 between CEE and the Sedona, Arizona Unified School District where 19 mentor teachers play a central role in the preparation of teachers.

The third monograph article opens the window on a partnership program at the secondary level. The Integrated Secondary Teacher

Education Program (I-STEP) was first implemented with selected Flagstaff schools in part because, as Kain, Tanner, and Raines say, "we were . . . under some pressure because our elementary school-based teacher preparation programs . . . were nationally recognized as reformation leaders, while secondary education (at NAU) had changed very little over time." As one learns about the development and implementation of the I-STEP project, attention should be given to the problems and solutions found in this experience. The reader should especially focus on the classic "theory versus practice" and "faculty versus practitioner" dynamics that play out as this program is planned and put into practice. It offers advice at the case level for those contemplating any kind of school-university partnership at any grade level.

In the final article, authors Prater, Miller, and Minner describe a partnership of a very special kind in a setting on the Navajo Reservation three hours from the NAU campus. The Rural Special Education Project (RSEP) has as its primary goal "to increase the number of qualified teachers to teach Native American children . . . for rural and reservation areas." This partnership with the Kayenta, Arizona Unified School District emphasizes course work and classroom experience for college students who live in the Kayenta area as well as those from the NAU campus. The reader should be particularly interested in how these two student groups work with and learn from each other. This program is a good example of how cultural sensitivity can be addressed at the experiential level.

In reading this CEE Monograph on school-university partnerships, you will find program histories, descriptions, and evaluations of older and newer programs that focus on children in elementary, secondary, and special education settings. And, you will find examples of projects in cities and in rural areas, demanding different program configurations. Given all of these variations, however, one will find in all of these teacher preparation efforts a common core of purposes. This core includes cooperative planning work, teachers and faculty training students together, and pre-service teacher trainees gaining experience in the setting for which they are being prepared. It is our hope that these stories will encourage others to try this risky but important experiment in teacher preparation–The School-University Partnership.

Stephen D. Lapan, Ph.D.
Sam Minner, Ph.D.
Series Editors
February 28, 1997

REFLECTION, RESEARCH, AND RENEWAL IN A SCHOOL-BASED TEACHER EDUCATION PARTNERSHIP PROGRAM

Peggy Ver Velde, Sherry L. Markel, Jeanne Dustman,
Barbara Campbell, and Mary Knight

The Flagstaff Professional Partnership Program is a joint venture between the Center for Excellence in Education at Northern Arizona University and the Flagstaff Unified School District. The philosophy, theoretical framework, accomplishments, and evaluation of this program are described through the voices of those who have been most intimately involved in the implementation of the program. Through the processes of reflection, research, and renewal, the program has survived and flourished, serving 50 university students, 25 mentor teachers, and approximately 750 school children each year.

The following sections describe various facets of the program.

- History of the partnership
- Beliefs, goals, and objectives that guide the program
- Program structure and implementation processes
- Supervision and instruction
- A year in the school-based program
- Voices of stakeholders–reflections from mentor teachers, former students, teachers-on-loan, and elementary students
- Research and evaluation–opportunities for reflection and renewal

History of the Partnership

In spring of 1985, the Center for Excellence in Education (CEE) initiated a school-based, elementary teacher education program in partnership with Flagstaff Unified School District. The program, which at the time was a one-semester experience, opened with 25 teacher education students and two Northern Arizona University (NAU) professors on-site in a 14 foot-wide trailer located behind Christensen Elementary School in Flagstaff. The students took 14 credits of university coursework in the trailer and spent 2 1/2 hours each day teaching in classrooms under the guidance of volunteer mentor teachers and the supervision of the two faculty members. All coursework was integrated into one syllabus, incorporating the competencies from five different teacher education courses. During this pilot phase, the program, named "The Program for Learning Competent Teaching" by one of the professors, was scrutinized by CEE faculty, the CEE Curriculum Committee, and the NAU Curriculum Council. It was officially accepted as a course in the fall of 1985.

In spring of 1992, the program was expanded to a two-semester format, incorporating all the elementary education coursework except Introduction to Education and Educational Psychology.

Evolution/Evaluation of the Program

Since 1985, there have been many changes, improvements, and innovations in the program which were initiated by program faculty in order to deal with changing issues in education and to strengthen weaknesses or address problems that became apparent from time to time. Ongoing evaluation of the program consisted of pre- and post-assessments of student learning in the areas of technology, multicultural education, and gender equity. Weekly anonymous reflections, written by each student, provided a continual feedback system. In addition, the NAU team members assessed videotapes of students' classroom performances on a regular basis. Exams, case studies, reviews of articles, and other assignments rounded out the evaluation procedures for students and for the program itself.

Presently, two elementary schools in Flagstaff (Christensen and Thomas) host the program. Fifty NAU students are served each year by the two-semester, comprehensive program and four NAU team members are responsible for the academic program and the supervised classroom experiences. For school years 1993-94, 94-95, and 95-96, the Partnership utilized "teachers-on-loan" from Flagstaff Schools with their basic salaries paid by NAU. Twenty-five specially trained mentor teachers work with the NAU students on a daily basis and approximately 750 school children are affected by the program.

Beliefs, Goals, and Objectives: Foundations of the Program

This school-based, elementary teacher education program exemplifies three basic tenets. These are:

1. A school-university partnership is essential to the preparation of professionals for the realities and challenges of the elementary classroom. Both parties must contribute to and benefit from the program.
2. Pre-service teachers profit from daily immersion in the life and work of the school, with their experiences guided by trained mentor teachers and coached by school-wise university instructors.
3. School settings that serve children from diverse social, cultural, and ethnic backgrounds provide a rich environment for aspiring teachers to learn the skills and abilities of teaching.

Program goals and objectives derived from these beliefs are described in the following sections.

Goal Statement

The partnership between Flagstaff Unified School District and CEE is built upon the foundation of a shared goal: to prepare the best possible teachers for all children in the elementary grades. To serve this goal, specific objectives guide the program activities and curriculum. These objectives are met through close teamwork among classroom teachers, the full-time university team members assigned to the school, and the pre-service teachers who volunteer for this highly experiential program.

Objectives

Traditional academic content. The program blends traditional academic content with non-traditional information that is crucial for a professional to know. Included are:

- Knowledge of theories, content, and methodology of teaching language, literature, mathematics, science, social studies, and the arts
- Application of this knowledge through daily classroom teaching assignments
- Administration and interpretation of formal and informal assessments
- Utilization of educational technology in daily teaching assignments

Students learn this content in daily lectures, seminars, and workshops in portable classrooms at each school site and they apply their knowledge on a daily basis in their classroom teaching.

Non-traditional objectives. Because the university curriculum is integrated, with no repetition or redundancy, there is time for students to learn the following non-traditional content through daily teaching experience within the school environment.

- Planning and teaching lessons that integrate the arts and multimedia technology into daily lessons
- Working as a team with other teachers and professionals
- Professional behaviors and interpersonal communication skills
- Self-evaluation and reflection on the success of their daily teaching
- Classroom management and discipline strategies

In addition to their daily teaching, students also assist in many extracurricular activities and present at professional conferences such as the Arizona Reading Association Conference. A typical year's schedule of teaching and study is described later.

Program Structure and Implementation Processes

Students

Fifty volunteer students enter the program each spring. A number of non-traditional students–working parents with children, students on tribal scholarships from nearby reservations, and first-generation university students from rural areas—have been attracted to the program during the past 10 years.

Mentor Teachers

Approximately 25 volunteer mentor teachers participate, each accepting two NAU students into the daily life and work of their classrooms. Mentorship requires teachers to share their students, their classroom, their time, and their professional ideals with their NAU team. Mentor teachers typically receive either a stipend of $200 or a three-credit tuition fee waiver each semester. Although mentors benefit from the hard work and enthusiasm of the NAU students, they also have to give up a degree of professional privacy because everything they say or do is scrutinized by their impressionable team of would-be teachers.

Mentor teachers who volunteer to accept the teacher trainees into the life of their classrooms are recognized for their own expertise. They spend a great deal of time with their university student apprentices planning, explaining, sharing ideas, and giving feedback after lessons are taught. These mentors do not treat their teacher trainees as assistants or observers. Instead, they hold them responsible for children's learning from the first week of the program.

The CEE Team

Two tenure-track professors work full-time in this elementary school setting, teaming with two instructional specialists (and, when university resources allow, a teacher-on-loan). One of the professors explains his role this way: "When I get up in the morning I get dressed, put on a tie, and go to work at an elementary school. Some of the things I have to do there are not the kind of things I got my doctorate for, but that is what makes the program work–constant attention to a lot of issues that you don't face on campus."

Because the program has been institutionalized by CEE, there is an ongoing, informal program of faculty induction. New faculty are recruited and hired partly on the basis of their interest in school-based teacher education. They may spend several semesters observing and working part-time in the program before they elect to become more fully involved with the partnership.

In addition to the two professors, there are two unique staff positions that have been utilized at various times in the history of the

program: the instructional specialist and the teacher-on-loan. Both of these positions have been specially designed for this school-based program. Depending upon program needs and available resources, each school site may have a professor and one or more of these special staff positions. Instructional specialists are permanent NAU employees, while teachers-on-loan are given a one- or two-year leave of absence from Flagstaff Unified School District to work with the program, with most of their basic salary paid by the university. Both of these professional categories require successful and extensive, school experience, strong interpersonal skills, and in-depth knowledge of content.

Supervision and Instruction

Supervision: A Team Approach

In addition to the mentorship of classroom teachers, the NAU students are continually supervised, coached, and supported by full-time university instructors, instructional specialists, and/or teachers-on-loan who are on-site at all times. These individuals become team members with teachers and administrators at each host school, guiding and assisting students in lesson planning and in the acquisition of the skills and abilities of teaching.

The teacher-on-loan arrangement has been a plus for the program because of the expertise and credibility that these professionals bring to the school-university partnership. These teachers are on assignment for one or two years. Since 1993, when this position was piloted, teachers-on-loan have been selected from the ranks of experienced teachers who were graduates of the program or who had served as mentor teachers. In addition to their supervisory responsibilities, teachers-on-loan assume a variety of instructional roles depending upon their areas of expertise.

Currently, in order to avoid the uncertainties of university budgeting for temporary positions, the teacher-on-loan position has been put aside in favor of the more permanent instructional specialist position, another unique staffing approach. This permanent university position is designed especially to support school-based programs. The two instructional specialists, one at each school site, collaborate with mentor teachers and university faculty to supervise the daily operations of the program. Their responsibilities range from recordkeeping to evaluation of students' classroom teaching. They also conduct lectures, seminars, and workshops on a variety of professional topics and issues.

Team members (NAU professors, the instructional specialists, and, when resources allow, the teachers-on-loan) are recognized for their expertise in their own content areas (e.g., reading, language arts, mathematics, science, social studies, the arts) and for their ability to function in the real world of the school. When problems arise, and

problems are inevitable in this practical setting, team members are available to work with mentor teachers and university students on a moment's notice. They also observe daily in classrooms, thus allowing them to monitor their students' development of teaching skills and abilities. In addition, because team members are all certified teachers, they may assume classroom duties while teachers conduct seminars and workshops with NAU students in the portables.

Key Features of the Program

In summary, the program has three unique features. These are:

1. a strong, early, supervised experiential component,
2. integrated course content, characterized by an interdisciplinary approach and erasure of traditional course boundaries, and
3. high standards of professionalism, exemplified by close teamwork between teachers, university students, and the university team who coordinate the program on a daily basis.

A Year in the School-based Program

Semester I: Communication and Literacy

Schedule. Students teach from 8:00 a.m. until 10:30 a.m. recess and spend the rest of the morning in lectures on course content in the portable classroom.

Academic and professional content. This semester integrates many facets of K-6 literacy instruction, including children's literature, reading and writing processes, oral language development, literacy in content areas, and evaluation of children's language strengths and needs via case studies. This content is bridged to the pre-service teachers' classroom experiences through the study of classroom management, discipline, and the professional skills required of a teacher.

Classroom experience. Two students are assigned to each mentor teacher. As a team, they plan each week's program in advance. Each student is assigned a daily lesson, with responsibility for bringing about tangible evidence of children's learning. Students work in a primary classroom for eight weeks and in an intermediate classroom for eight weeks.

Semester 2: Integrated Curriculum

Schedule. Students meet on-site in lectures from 10:30 a.m. to 12:30 p.m. They then enter their assigned classrooms to teach for the rest of the school day.

Academic and professional content. In this semester, students learn the content and methods of teaching mathematics, science, and social studies, plus evaluation of learning, educational technology, and teaching at-risk students. University professors, teachers, and resource speakers collaborate to present many of the lectures for this semester of study.

Classroom experience. As in Semester 1, students are assigned in pairs to classrooms, working at a primary level for eight weeks and an intermediate level for eight weeks. They teach daily, with full responsibilities for lesson delivery, materials, and evaluation of student learning.

Participant Reflections

Two Members of the CEE Supervisory Team

Our role as supervisors in the Flagstaff partnership program carries multiple perspectives and responsibilities. All members of our team (i.e., NAU professors, instructional specialists, and teachers-on-loan who have worked with us in past semesters) assume these responsibilities in addition to their teaching duties in the program.

Students entering the first semester of the program have had few experiences in the classroom. They have had only a beginning, introductory course on teaching as a profession and a basic course in educational psychology in their required prerequisite coursework. Therefore, our partnership with the students must begin the first day. A brief orientation and introduction to the program is held on the NAU campus. Immediately after this, the intense pace of the program is established as students carpool to the school sites where we begin the process of melding the routines and cultures of each school site with the programmatic requirements of the university.

Students are typically nervous and apprehensive about the work demands of the program and their capabilities as teachers, so we clearly outline expectations concerning standards of behavior, performance, and attitude. In our supervisory role, we must be temperamentally capable of providing caring, positive support while maintaining high standards and expectations of performance. We give constant feedback on classroom observations of students' teaching as well as lesson planning and university coursework assignments.

Shulman's (1987) conception of teacher knowledge is an important component of the supervisory experience. Supervisors must draw upon a body of knowledge of professional practice and content knowledge as well as an awareness of the school culture.

The real life experiences presented in the elementary classrooms present a myriad of learning opportunities. We strive to anticipate some of the learning and knowledge needs of the partnership students but the unpredictable nature of children and classrooms requires that we be flexible, with the ability to seize teachable moments.

Mentor teachers are a critical component of the Flagstaff Partnership program. However, supervisors are liaisons, the connecting link among NAU students, university programs and faculty, mentor teachers, school administrators, and district personnel. This requires tact as well as a finely tuned sense of vision of program and purpose. We learn to recognize those teachers who exemplify best practice models. These individuals do not fit a "cookie cutter" standard. We identify effective teaching practices within a variety of methods, techniques, and contexts. Partnerships between mentor teachers and teacher trainees strengthen because of our active participation. It is critical that relationships of trust and respect are built within the school community. Mentor teachers, as well as principals, must see the supervisors as knowledgeable, school-wise, and aware of the dynamics of the politics of power within the school and district.

Although conflicts arise infrequently, we must be skilled at communication and mediation methods. The needs of mentor teachers, teacher trainees, and elementary students are our priorities. When the needs of any of these members of the partnership are jeopardized, the supervisor must help resolve this conflict. In the event that this cannot be resolved, we must sometimes reconsider teacher trainee placements. It is imperative that learning is protected for all students and that mentor teachers' autonomy is supported within their classrooms.

The supervisory team members often conduct after-school inservices and coursework for the continuing education of the participating mentor teachers at the school site, focusing on issues of teacher education and mentorship. The biggest challenge to this effort has been the demands of the school day. As practitioners, mentor teachers arrive at these sessions after having already put in a full day of teaching. They're tired. Time for professional development and continuing education for inservice teachers is as big an issue for these sites as it is in the rest of the country (Fullan, 1993).

As students evolve through many stages of concern and competencies during the two semester experience, the supervisors engage students in an ongoing program of informal and formal conferencing and teaching evaluations utilizing careful and detailed documentation. From our perspective, the Flagstaff Professional Partnership program includes a great deal of planning and effort, but it is rewarding because we participate in the growth of highly motivated, inspired beginning teachers who have a sense of themselves as teachers and of classrooms as places of community and learning. In this

program, supervisors are conductors and guides for students on their journey toward learning to be teachers.

A University Instructor

All of us on the CEE team have several roles: supervisor, coordinator, technological troubleshooter, manager of resources, school liaison, and instructor. Although all these diverse responsibilities make the work interesting, it is the instructional component of the program that pulls everything together and blends theory and practice, ideas and applications. We all have teaching specialties, those areas which we have studied, researched, and taught. Our team members come from the university setting as well as the school. Some of us have extensive on-campus teaching experience, while others have been instrumental in bringing about change in their schools through exemplary teaching or leadership.

Regardless of our background or specialties, we soon come to realize that our students expect us to apply our big ideas, theories, and knowledge to the immediate realities of their daily teaching experiences. They have questions, and they want answers. In addition, they expect us to "walk our talk," delivering our lectures according to the most effective models of teaching that we have espoused. They are not impressed by repetition, rambling lectures, or lack of closure. For those of us who have taught on campus, where things are a little more predictable and tidy, school-based instruction offers its own challenges.

Fortunately, there is an aspect of school-based teacher education instruction that gives us welcome support, if we will accept it. That is the fact that our students are strongly motivated to learn our content because they are teaching every day. Thus, the very reality that makes college-level instruction challenging, on one hand, makes it more powerful on the other.

Another benefit for us is the team approach to instruction. Sometimes two or three of us work together, each presenting a different aspect of a topic. It is refreshing for the students and for us. This teamwork requires planning and strong professional relationships among team members.

A university instructor considering joining a school-based program must be prepared to make modifications in instructional approaches; the immediate concerns and questions of students sometimes preempt even the most carefully-planned lecture. His or her teaching will be scrutinized by aspiring teachers and measured against the criteria that they use to plan their own lessons. The professorial ego is always in danger of becoming deflated. One professor, since retired, inadvertently explained it very well: "I wish you school-based people would keep your students out at the school for all their coursework. When they come on campus, they ask too many questions or they want to talk in

class about what they have done in the classroom. It takes time away from my lectures." Obviously, teaching in a school-based setting is not appropriate for everyone, nor should reluctant faculty be assigned to school-based teams or coerced into volunteering. Those who truly want to try it, deserve a phase-in period and supportive mentoring. They need reassurance that they can choose to rotate in and out of the program, depending upon their professional advancement requirements.

Even though the instructional demands are different from those of on-campus teaching and every day is a new challenge, the NAU team members find it satisfying to teach in a school-based program. The success of their teaching is reflected in their students' classroom performance on a daily basis.

A Program Graduate

Educators, by nature, tend to be risk-takers. It's only natural, then, that a program such as the Flagstaff Professional Partnership would attract individuals who wish to stretch in their academic pursuits. Within this framework, pre-service teachers can grow in a myriad of directions that will serve them well in their professional careers and in ways that cannot be replicated outside an elementary school campus. The "real-life" aspect of education in a field-based program is often the most attractive reason for enrolling in this rigorous and emotionally charged experience.

As a student in the fall of 1988, I found myself amid 25 university students as we ventured into the land of young inquisitive minds. This in itself was a daunting prospect. Yet, we knew that daily contact with students provided the only real way to cultivate classroom management skills. In discussing and reflecting with other students then and in years since, this was one of the strongest points of the program. Lesson planning, material preparation, and daily practice in the execution of instruction were truly valuable experiences. The opportunity to practice quality interactions with students during instruction and transitions made the difference for us. It was why most of us were there.

Another strong point of the program was the opportunity to develop positive professional habits. Enrolling in the program truly marks the beginning of an educator's professional career. Even though graduation is not close at hand, students are expected to adhere to those standards applied to every classroom teacher. Writing lesson plans, gathering instructional tools, dressing professionally, and handling of confidential student information were just some of the professional responsibilities that students opted to include in their college education by choosing this school-based program path. Though it was overwhelming at first, I found students and university instructors formed a support network that encouraged success. In a career that continually requires juggling of instructional duties, university classes,

and personal life, the practical experience gained during this time was just as important as many theoretical concepts.

Overall, the ability to reflect and obtain feedback from a variety of sources was invaluable. Mentor teachers and university instructors observed us on a daily basis and offered insightful suggestions. Student teaching partners commiserated during difficult times and acted as cheerleaders in moments of success. In sessions of personal review, our written reflections encouraged integration of the week's experiences with knowledge we had acquired. Theory and experience blended together to form a realistic perspective of the field we were entering.

A Teacher-On-Loan

Since acquiring a professional position, I have had the pleasure of working with university students participating in the Flagstaff Professional Partnership program. The past year, while working as a district teacher-on-loan, I have been fortunate to return some of the nurturing that came my way as an undergraduate in the same situation. This year has provided a wide-angle lens with which to pull back and view the larger picture.

The primary purpose of this position is to provide ideas about current practice from the classroom perspective. The teacher-on-loan position offers the opportunity to show insights regarding emerging trends such as the use of student portfolios, inclusion strategies, and integration of technology. Having been in recent touch with the pulse of our school's community proved useful to me in relating to the real-life classroom situations our students faced every day in their classroom teaching.

One of the most rewarding aspects of this position has been the opportunity to work with the teachers who volunteer to mentor teacher trainees during each semester of the school year. Although a teacher's busy day allows for some interaction with other building professionals, it is rare to have more than a moment to reflect with a peer. During the daily observations of teacher trainees, I found mentor teachers' perspectives of progress to be truly insightful. As a link between the university and the school, teachers depended on the familiarity the teacher-on-loan had with their school and student population.

My favorite aspect of this entire year has been to observe the growth that the teacher trainees have achieved. My personal perception of that adventure as a former student in the program has provided understanding during moments of student despair. A student's progress from wide-eyed amazement at what is actually required of a classroom teacher to the perfect execution of a creative, instructionally sound lesson is a beautiful sight to see. I have been constantly amazed by the resounding strengths these students have in their desire to become better teachers. Bounding in the university portable after a morning of

teaching, they come prepared to reflect on their most recent experiences and eager to receive even more information.

It has been truly inspirational to be a "teacher of teachers." There's nothing like espousing the importance of quality instruction to inspire one to examine ones own teaching practices. As important as feedback is to the teacher trainees, I cannot say it was any less important for me as I interacted with them. The moments to ponder were just as valuable, the successes just as sweet.

A Mentor Teacher

I have been a mentor to pre-service teachers for eight years. As I reflect on the overall value of the program, I recognize that this approach provides interns an immediate and in-depth encounter with the processes of teaching and learning. The NAU students are given the forum to gain knowledge and information, then apply it directly in the classroom. They are allowed to experiment under safe and supportive conditions and literally transfer theory into practice.

One example of this is their study of thematic instruction and the development of unified content. Interns are given instruction in their classroom setting, then asked to develop thematic units to be implemented with their K-6 students. First, the students receive the theory and information through lecture and guided practice. Next, they develop units that are directly applicable to the students in their assigned classrooms. Through the cooperation and guidance of their mentor teachers and NAU instructors they organize a thematic unit that is immediately implemented in a classroom. A tremendous amount of learning takes place because the interns are allowed to pull from the expertise of a veteran teacher, receive the guidance and support of university instructors and staff, and draw on their own experience. This occurs simultaneously while the intern is implementing a unit from beginning to end.

I believe the most valuable learning occurs from the response of the elementary students themselves. The NAU pre-service teachers get immediate feedback regarding the value and appropriateness of the lessons. Whether they succeed or fail, they can immediately reflect on their teaching practices. They understand very clearly and immediately how a teacher's practices can enhance or inhibit the learning process.

Over the years of service to the program, I have come to realize the developmental nature of the teaching process. Like students in my sixth-grade classroom, the pre-service teachers enter with many diverse backgrounds, varied experiences, and different levels of self-confidence. It becomes my responsibility to assess and accommodate each pre-service teacher in order to provide the individual support needed to nurture growth. I have used numerous approaches to guide them through their developmental stages. The most important and fir-

reaching aspect is targeted feedback that is immediate, specific, and honest. My philosophy is to focus first on the positives, then present recommendations for improvement. An open communication policy must exist, otherwise they are left to speculate on their success or failure as teachers. This is especially risky for two reasons. First, we may lose or discourage excellent pre-service teachers who simply have not reached their true potential. Second, we may encourage them to persist in unsound teaching practices. Neither of these is a good choice. When a well-established communication policy is in place, successes can be celebrated and failure can happen without regrets. We learn from both.

Good mentors provide pre-service teachers with a pathway to successful teaching. They can point them in the right direction by assisting in the development and organization of child-centered, age-appropriate lessons. They identify the potential dangers and risks by modeling valuable strategies and offering targeted guidance. Mentors can provide alternative routes if necessary. Since calculated risk taking is part of good teaching, pre-service teachers must be allowed to take risks and approach teaching from many directions. This may mean trying something again in order to reach the needs of all the learners. Along any pathway you should stop periodically to reflect upon where you have been and reevaluate where you are headed. A good mentor will allow for this reflection or adjustment to occur and structure it when it is needed.

There are so many obvious advantages of this program for the NAU students. They learn the real life demands of a teacher under the careful guidance of many practicing professionals. The program structure builds on strengths and allows for growth to occur quickly and permanently. A secondary benefit lies in the professional stimulation this program provides for the mentors as well. Having adult learners in the classroom provides tremendous motivation for me. New challenges are presented and risk taking is reinforced. These pre-service teachers take personal and professional risks daily and I am excited to be in a position to assist those endeavors. My classroom truly becomes a community of learners. Every pre-service teacher has taught me something about teaching and learning. I value that aspect of the program because I am reminded of how much I have yet to learn.

Finally, I understand the necessity of giving back to the profession in order for the profession itself to flourish. Being a mentor to students in the Professional Partnership program allows me to give back in many ways.

NAU Students

"Our NAU instructors also had experiences as classroom teachers so they were able to give us real life experiences. We got immediate

feedback because we were applying our knowledge in the classroom right away. The wealth of knowledge, information, and support that was provided for us was . . . phenomenal."

"There is not enough space to state all the skills, information, and the abilities it took for me to bring about children's learning. The hands-on activities, working in the classroom, the professional and personal growth development, and being bonded with a group of college students with the same goal made it possible."

"The only area I ever felt I was lacking training in was the actual names of some of the techniques we learned. I had a hard time recognizing things by name and would quickly realize after a brief discussion that it was something I had been taught or had taught myself. This never stood in the way of children's learning, though."

Elementary Children

"The NAU students taught me by having fun and every second you're learning. I learned the planets, some ancient Indians, and about the five food groups, weather, and I can't remember all the others." (Fourth Grader)

"It helps to understand more of the aspects of college and makes me want to attend eventually. It also gives extra help in trouble areas which one teacher may not be able to give." (Sixth Grader)

"I liked Miss C. because she always complimented me on my work when no one else liked it."(Third Grader)

Research and Evaluation

For an educational endeavor to thrive, it must sponsor scholarship and inquiry. The Flagstaff Professional Partnership sponsors action research for the purpose of examining educational issues as well as internal assessment of program effectiveness. Because of the school-based nature of the program, classroom teachers, university students, and program faculty can collaborate to formulate questions and search for answers to problems of mutual interest. This section will describe the two research-related facets of the program. These are:

1. applied research projects carried out by NAU faculty, pre-service teachers, and mentor teachers; and
2. a ten-year follow-up evaluation of the program itself by graduates and school administrators.

Applied Research Projects

Throughout its history, the program has received grant funding for a variety of school-based research projects, ranging from a one-year study of first graders' recognition of high-frequency words as a result of storywriting experiences via computer to an 18-month investigation of

gender equity issues in teaching sponsored by the U.S. Field-Initiated Research Program. Mentor teachers, NAU faculty, and pre-service teachers all participated in these studies. A brief list of some of these projects covering the academic years 1992-96 can be found in Appendix A.

Evaluation of the Partnership Program: Follow-up with Graduates, School Administrators, and CEE Faculty

Background. A follow-up study was initiated in 1995, designed to assess the effectiveness of the program over its ten year evolution. This full-scale evaluation, conducted by program faculty, surveyed graduates and their immediate teaching supervisors (usually school principals) regarding the skills and abilities of graduates to bring about children's learning. The study, funded in part by an Assessment Grant through NAU's Office of Instructional Development and by an NAU Applied Research Grant, was completed during Spring Semester, 1996. Results of this evaluation research are summarized in the following section.

A follow-up study of the teaching abilities of graduates of the Flagstaff school-based teacher education partnership. The question addressed by the study was: What are the abilities of program graduates to bring about children's learning? Questionnaires were sent to graduates of the program, asking a series of nine questions regarding their abilities to plan and carry out effective instruction in their elementary classrooms. Also, with permission of these respondents, matching questionnaires were sent to the school administrators who supervised and observed their teaching on a daily basis. These administrators were asked to rate our program graduates on their abilities to effect children's learning. A total of 76 graduates and 38 administrators responded to the questionnaires.

All responses, including Likert Scale rankings for the nine questions plus open-ended comments, were recorded on a HyperQual database. Questionnaires for graduates and for their school administrators addressed nine general topics that specifically addressed bringing about children's learning in the elementary classroom. These topics are enumerated in the following section, along with ratings from graduates and administrators.

In addition, the questionnaire requested graduates (all of whom were practicing teachers) to reflect upon which of these topics were most crucial in bringing about students' learning and to indicate where they learned these teaching skills and abilities. Finally, administrators were asked to rate the teachers' skill in bringing about children's learning compared to other teachers with similar years of experience.

Results of this study yielded positive results regarding the abilities of graduates of the program to bring about children's learning. It

revealed a high level of self-confidence on the part of program graduates, matched by a high level of approval on the part of school administrators who supervised these graduates' work on a daily basis.

Overview of study results. The following (Table 1) shows a comparison between the responses of the program graduates (N=76) and their school administrators (N=38) to the nine questions. The high score of 3 on the Likert Scale for graduates indicated an "always to almost always" response, while a high score of 3 on the administrators' questionnaire indicated that "teacher does this well." A 2 on the graduates' questionnaire indicated "sometimes" and a 2 for administrators meant "teacher does this fairly well." A 1 on graduates' scales indicated "seldom to never," while a 1 on administrators' scale indicated "teacher does not do this well."

Because there were no responses from either group in the 1 category, and few in the 2 category, the chart has been simplified to show only the responses in the 3 category from graduates and administrators.

In addition to these nine topics, the questionnaires asked three additional questions of graduates and administrators. Results are summarized below.

Question #1: Which of the questionnaire topics do you feel are most important in bringing about children's learning?

Graduates chose *planning lessons* first (32%), followed by *adapting instruction* second (22%), and *using a variety of approaches* third (21%). On the low end of the rating, *being knowledgeable* was chosen by only one percent (1%) for first choice.

Administrators, on the other hand, chose *adapting instruction* as a top item (30%) followed by *promoting a safe environment* (27%). Only 5% chose *being knowledgeable*, indicating a distinct area of agreement with graduates. Only 2% of administrators chose *planning lessons* as important.

One might speculate that graduates placed such a high priority on *planning lessons* because they believed a well-planned lesson logically incorporated *adapting instruction* as well as *promoting a safe environment*. Careful, detailed planning is a major focus of the school-based program. This dichotomy between graduates and administrators is an interesting area for future study.

Question #2: Of your top three questionnaire topics, please indicate where you learned them.

The "School-based Program" was rated a 3 (almost to almost always) as the source of graduates' learning by 66% of respondents. "Being a Teacher" was rated a 3 by 14% of graduates.

Table 1
Graduate and Administrator Responses

Questionnaire Topics	Percentage of Level 3 Rating* (Admin)	Percentage of Level 3 Rating** (Graduates)
1. Planning lessons.	97	87
2. Planning instruction for variety of learner capabilities.	86	97
3. Using classroom time effectively to bring about student learning.	73	89
4. Conducting class discussions using a variety of strategies.	93	89
5. Confidence in knowledge of subject areas being taught. (Graduates' 3 indicated "very confident")	89	Highest-reading 89 Lowest-math 48
6. Motivating student learning	95	92
7. Maintaining a "safe" classroom environment that promotes learning	89	97
8. Fostering classroom behaviors that support learning.	76	96
9. Utilization of a variety of teaching approaches in instruction.	95	86

*Teacher does this well." (rating from the administrator)
**I always to almost always utilize these elements in bringing about children's learning." (rating from the graduate).

Question #3: How would you rate this graduates' skills in bringing about children's learning compared to other teachers with similar years of experience?

This question, asked of Administrators only, produced clearly positive results. Fifty-nine percent (59%) of administrators rated their school-based teacher graduates *much better prepared;* 19% rated them *somewhat better prepared;* 3% indicated *about the same.* There were no ratings in the *not as well prepared* or the *lacking adequate preparation* category. Strangely, 19% of administrators did not respond to this item. This might be a function of the format of the

administrators' questionnaire because this item was on the back of the last page. Again, this is an area that deserves further investigation. In general, however, the study results indicate that program graduates were confident and knowledgeable teachers, not only in their own eyes, but also in the estimation of the school administrators who supervised their work on a daily basis.

As a follow-up to this study, a number of case studies are currently being conducted wherein school administrators and teachers are interviewed regarding the power of the program to prepare well qualified teachers. In addition to the interviews, teachers and administrators who volunteer for these studies are asked to provide specific information regarding student achievement that might reflect back upon the teachers' abilities to bring about children's learning. Results of these studies will be published later this year.

The research and evaluation efforts summarized in this section, from the classroom-based action research projects to the major follow-up studies of our graduates, make the partnership between the University and Flagstaff Schools lively, dynamic, and responsive.

Conclusion

"That the world of teacher education endures does not mean that it does not need changing or should not be changed" (Goodlad, Soder, & Sirotnik, 1990). The Flagstaff Professional Partnership program was initiated over ten years ago in response to criticisms of teacher education. However, good intentions would not have been enough to keep this school-based partnership healthy and long-lived. It is only through a continuous program of reflection, self-evaluation, action research, and hard work that such a complex entity can survive. The program also flourishes because the stakeholders (the NAU faculty and staff team, mentor teachers, and pre-service teachers) all value it and devote a great deal of time and effort to keep it alive. With all its challenges and successes, it clearly exemplifies the mission of the Center for Excellence in Education at NAU to prepare education professionals to create the schools of tomorrow.

References

Fullan, M. (1993). Change forces: Probing the depths of educational reform. London: Falmer Press.

Goodlad, J. I., Soder, L., & Sirotnik, K. (1990). Places where teachers are taught. San Francisco: Jossey-Bass.

Shulman, L. (1987). Knowledge and teaching: Foundations of the new reform. Harvard Educational Review, 57 (1), 1-22.

Applied Research Reports

Campbell, B., Dustman, J., & Ver Velde, P. (1994). An assessment of the use of technologically-assisted student writing as evidence of learning in mathematics and science.

Cockrum, W., & Ver Velde, P. (1994). Promoting equity in teacher education within a school-university partnership.

Cremasco, H., Emanuel, L., & Ver Velde, P. (1995). Utilizing multicultural children's literature in the Flagstaff School-Based Partnership.

Knight, M., Shushok, K., & Ver Velde, P. (In progress). An assessment of the effects of student-produced multimedia productions upon the learning of academic content in elementary classrooms.

Varner, M., & Ver Velde, P. (1995). A ten-year follow-up study of the teaching abilities of graduates of the Flagstaff School-Based Teacher Education Partnership.

Ver Velde, P. (1993). Assistive technology.

Ver Velde, P. (1993). Integrating the 'EFG's' into the curriculum.

Ver Velde, P. (with Brown, D., & Peterson, M.). (1993). The effect of computer dictation experience upon paper-and-pencil writing of first- and second-grade students.

Ver Velde, P. (1994). Educational technology in a school-university partnership.

BEST COPY AVAILABLE

Appendix A

NAU Applied Research: An Assessment of the Use of Technologically-Assisted Student Writing as Evidence of Learning in Mathematics and Science

The study compared mathematics and science test scores of students who had first written "math reflections" and "science reflections" with those who took the test first and then wrote reflections. Results indicate that those students identified as having problems in mathematics and science seemed to benefit considerably from the opportunity to reflect first, and then take the test. This study involved two sixth grade teachers, two NAU faculty members, four NAU students, and 50 sixth-graders.

NAU Mini-Grant Research Project: The Effect of Computer Dictation Experience upon Paper-and-Pencil Writing of First- and Second-Grade Students

The study indicated that first and second-graders who dictated stories to NAU students via the computer and had their stories edited and printed immediately increased their hand-written storywriting skills to a greater degree than those who did not participate in the computer publishing sessions. Two teachers, a Chapter 1 paraprofessional, eight NAU students, and 45 school children participated in this study.

Arizona Commission on the Arts/Arizona Humanities Council/National Trust for Historic Preservation/Phi Delta Kappa Project: Integrating the 'EFGs' into the Curriculum

The three themes of Ecological, Future, and Global Education were integrated by NAU students into their classroom teaching. Artists in Residence, field trips to cultural and scientific sites on the Colorado Plateau, and guest presenters provided the spark for NAU students to design and teach lessons that blended these three themes into the teaching of language, social studies, mathematics, and science. A collection of university students' lesson plans was published, and an evening open house showed parents how their children had been involved in these exciting activities. NAU faculty, students, and elementary teachers made regional and state conference presentations to disseminate the results of this project. A pre- and post-assessment of university students' skills and abilities in planning, teaching, and assessing interdisciplinary units of study showed growth in stating clear objectives, developing effective lessons, and utilizing a variety of resources.

NAU Technology Grant Research: Educational Technology in a School-University Partnership

The grant provided hardware and software for program sites. NAU students participated in workshops and seminars on educational technology, and then applied their knowledge to classroom teaching. Pre- and post- tests of attitude and knowledge indicated that students increased their confidence, skills, and abilities in utilizing technology as a tool to bring about children's learning.

NAU Institute for Human Development: Assistive Technology

Through a combination of seminars, hands-on workshops, and the purchase of special technology for the program, NAU students learned to adapt classroom instruction for special-needs students via technology. Pre- and post-assessments conducted by the Institute for Human Development indicated that NAU students gained in knowledge and confidence in utilizing technology for teaching students with special learning needs.

U.S. Field-Initiated Research: Promoting Equity in Teacher Education Within a School-University Partnership

This 18-month study dealt with the issue of equity in teaching. Mentor teachers and NAU students assessed their teaching via videotape to determine if children were being taught equitably under their direction, regardless of gender, ethnicity, or handicapping conditions. Workshops and training sessions for NAU students and mentor teachers covered question-asking, classroom interactions, "calling-on," and other evidence of equity in teaching.

Research results indicated that teaching equitably is a skill that can be learned and practiced effectively by teachers-in-training and experienced classroom teachers, regardless of their social or ethnic background.

Mini-Grant from Office of Cultural Diversity in Education: Utilizing Multicultural Children's Literature in the Flagstaff School-Based Partnership

A two-semester study involved 50 NAU students in the selection, critique, and utilization of multicultural children's literature in daily classroom teaching. Pre- and post-assessments verify that these pre-service teachers had acquired understanding and dispositions that prompted them to integrate this genre of literature skillfully into their classroom teaching.

NAU Applied Research: An Assessment of the Effects of Student-Produced Multimedia Productions Upon the Learning of Academic Content in Elementary Classrooms

This study, scheduled for completion by Spring 1997, involves two elementary classrooms—a kindergarten-first grade class and a sixth grade class. In each class, elementary students participated in a study unit (K-1 studied Weather and Grade 6 studied Careers). Before the units began, students in each classroom wrote answers to questions designed to assess their prior knowledge of their study topic. After the study units were completed, they again wrote an interim assessment to show their knowledge of their topic. Next, with the assistance of university students, each child used a computer to produce their own HyperStudio "stack" to show what they had learned. Finally, the elementary students wrote a post-assessment on their topic of study. All three written assessments plus the HyperStudio "stacks" will be examined by means of a specially-prepared rubric to determine if the production of the HyperStudio multimedia resulted in "extra" learning after the study unit was completed. This complex study is being conducted by two NAU team members, four NAU students, two teachers, and a student teacher. A final report will be ready by Spring 1997.

These applied research projects are possible because of our strong school-university partnership. The NAU/Flagstaff Professional Partnership Program seeks grants and conducts research every year, with the goal of enriching the educational experiences for NAU students, mentor teachers, and school children.

AN ELEMENTARY SCHOOL-BASED PARTNERSHIP: THE MENTORSHIP COMPONENT

Pat Wall, Emilie Rodger, Martha Brady, and MaryAnn Davies[1]

Two university vans hurtle, almost without need of drivers, through the 6:45 a.m. first glimpse of morning, and down the familiar canyon that swallows up fifty minutes any way you look at it. Inside the long silver and blue transporters, 27 sleepy, groggy, professionally dressed pre-service interns cram themselves among sheaves of lesson plans, bulletin board cut outs, children's books, math manipulatives, and science supplies. Finally, as the vans stop, the 27 pre-service interns uncork themselves from their myriad perches, balancing books and supplies against backpacks overflowing with graded papers, yogurt cups, and plastic containers filled to the brim with rainbow pasta salads. The pre-service students arrive as they do every weekday morning, at the elementary schools in Sedona, Arizona.

At that precise time in classrooms, behind desks, near copy machines, at blackboards, 19 seasoned elementary and middle school mentor teachers increase their energies, straighten out their thoughts, and begin plunging into the morning with blueprints of dialogue and modeling that will guide the Northern Arizona University (NAU) interns through another successful day with the children in their care.

Thus begins the daily experience of interns and mentors in the NAU/Sedona Partnership Program. This two- semester, intensive teacher education format places students on site in elementary schools in Sedona, Arizona for the majority of their professional education course requirements.

As more teacher education programs incorporate site-based components, it is critical to develop program assessments that will provide greater insight into their positive contributions to the professional development of public school educators as well as pre-service teachers. Within much of the teacher education and research literature, it is common knowledge that schools provide a critical forum for pre-service teachers to actually practice the theory that is provided by universities. What is not so clear is what benefits the schools derive from this relationship with universities. What distinguishes a truly symbiotic partnership from this common scenario is overlapping self-interests. Though schools and universities do not have the same primary goals, there is certainly a complementary dissimilarity between these education partners (Goodlad, 1988). The NAU/Sedona Partnership Program has become progressively more symbiotic over time, and there is evidence that the gains for the school and school district are clear. A study was designed to survey the role of the Mentor

---

[1] These authors were listed in this order by random choice. No sequence is implied.

BEST COPY AVAILABLE

Teacher and how this particular site-based teacher preparation program affects professional development of the Sedona Mentor Teachers. To this end, the Partnership faculty designed and implemented a preliminary study to assess the impact of this site-based program on the professional development of the Sedona Mentor Teachers and its effects on school environment. The program philosophy and history provide a foundational context which includes a description of literature-based mentor roles and a definition of mentor as used in this program.

Historical Background

Since its inception in 1993, the Center for Excellence in Education (CEE) at NAU has had as part of its mission the improvement of schooling in Arizona. One of the approaches has been to form partnerships with public schools in an attempt to address the practical problems confronting schools and to improve the preparation of educators. The birth of the vision grew out of a collaboration between Dr. Margaret Hatcher, Acting Executive Director of CEE, and Dr. Nancy Alexander, Superintendent of Sedona Unified School District, which resulted in the creation of the NAU/Sedona Partnership in 1992. This partnership brought classroom teachers and school administrators together with university professors and researchers to learn from each other and to simultaneously improve the educational process at all levels.

The Sedona Public Schools and CEE agreed on goals to be used as cornerstones for the newly created partnership. These were to:

1. improve schooling through exploration of new patterns of curriculum, instruction, and school organization,
2. explore new approaches to teacher education,
3. bridge the gap between research and practice,
4. create a medium for educational inquiry,
5. rethink roles, responsibilities, and relationships between public schools and universities, and to assure "best practices" dependent upon current educational theory and research (Hatcher, 1992).

To assist in the shared understanding and implementation of the partnership goals, the NAU/Sedona Partnership operates from five philosophical premises.

1. Each member of the partnership accepts as its secondary mission the primary mission of the other partner. For the university, that is the preparation of pre-service interns first and Sedona students second. For the Sedona District, education of the Sedona students first and university students second.
2. The partnership will acknowledge the strengths and insights of classroom teachers and administrators as curriculum innovators and teachers of teachers and use the expertise of these teachers and administrators to assure that university programs are reality-based,

practical, and current. These classroom teachers, designated as "mentors," are the bedrock of the partnership. More in-depth information regarding the definition and responsibilities of the "Mentor Teacher" follows.

3. The partnership will bring research and university expertise into the public setting.
4. Both partners, as equals, share ownership of collaborative planning, redirection of existing institutional resources, and joining efforts to obtain external funding.
5. The partnership will integrate the program commitments to professional development, school-based research, school improvement, and preparation of teachers. These partnership goals and philosophical premises formed the model for the NAU/ Sedona Partnership.

The NAU/Sedona Partnership Program currently has 19 Mentor Teachers participating in the education of pre-service interns. For our purposes, a Mentor Teacher will be defined as the classroom teacher who is responsible for facilitating pre-service interns' knowledge about the school community, classroom management, reflective practice, and ultimately, the importance of being lifelong learners both as teachers and as students.

Much of the current literature defines the role of mentor as the relationship of experienced teacher to a beginning teacher. In Anderson and Shannon (1988), various examples of mentor roles found throughout literature are cited, including: "Teacher, Sponsor, Encourager, Counselor, Befriender" (Odell, 1990, p.7). In addition, Parkay (1988) describes elements essential to a significant mentoring relationship as: similar thinking styles; modeling by the mentor of a professional commitment; and allowing the person mentored to determine his/her mode of learning and direction.

We have discovered that the mentors in the NAU/Sedona Partnership Program have begun to take on many of the aforementioned roles. To encourage the professional growth of a pre-service teacher, Mentor Teachers serve as professional role models and, as such, demonstrate appropriate teaching techniques. They also provide candid observations and give constructive suggestions regarding lessons observed, classroom management, and organization. Teachers who possess the qualities of active listening, reflective thinking, and articulate communication are especially successful in their role as mentor. Problem solving skills and conflict resolution are necessary qualities in establishing a viable relationship with interns as well as in modeling necessary attributes of successful professionals.

Stanulis (1995) states in her study of classroom teachers as mentors that "ideally, professional development schools will establish discourse communities where members are co-equal and knowledge is

mutually constructed" (p. 332). Within these schools teachers are given time and opportunities to discuss ideas and problem solve. "They (teachers) are also encouraged by colleagues, public school administrators and university faculty to play a critical role in preparing teachers" (p. 332).

In the NAU/Sedona Partnership Program professional development meetings are given high priority. These monthly meetings consist of four hour sessions in which mentors and university personnel engage in educational dialogue through presentations, literature readings, and decisionmaking pertinent to personal and professional growth. This critical time is also spent in modeling alternative methods of curriculum instruction. These meetings are collaborative in nature in a deliberate attempt to dispel the tradition of public school teachers as "silent partners" in a school-based teacher preparation program.

The Holmes Group (1990) concurred with the belief that there is a need for experienced, wise teachers to help revise the university's curriculum of education courses. "If we don't do that the professional development school is only a clinical setting" (Holmes Group, 1990 p. 82). In agreement with the Holmes Group findings, the mentors and university personnel of the NAU/Sedona Partnership Program have established rigorous criteria for the selection and continued participation of mentors. These criteria are that:

- As a mentor, one must be willing to improve/grow/change with other mentors and the NAU staff.
- One must be willing to be open (responsive) to being observed by others in the classroom.
- Attendance at a mentor workshop in August is required.
- A mentor must accept videotaping of classroom techniques in order to document the change process.
- At least three years of teaching experience are required.
- A mentor provides a written profile of classroom/teaching style for interns' information.
- Attendance at monthly networking meetings (either after school or a.m. release time) is required.
- A mentor commits to daily planning/reflection time with the interns as it works with the mentor's schedule.

Wilson (1995) describes some of the benefits to mentor teachers involved with pre-service teachers as experiencing professional growth, increased self-confidence, elevated status among colleagues and reduced teacher isolation. In Koskela (1995), cooperating teachers recognized their importance and influence over pre-service teachers. They saw themselves as adequately prepared and found serving as mentors to be personally satisfying and professionally enriching. Our findings concur with Wilson's and Koskela's in that Mentor Teachers gained increased self-confidence and professional growth through their participation in

the NAU/Sedona Partnership Program as indicated by the data collected.

Description of Study

At the end of the third year of the NAU/Sedona Partnership, program assessment focused on the relationship of the mentors to the NAU students and faculty. Specifically, we chose to examine the impact of the partnership on the professional development of the Mentor Teachers and the total school environment. This particular study examined two questions:

1. How has the NAU/Sedona Partnership Program impacted the professional development of Mentor Teachers?
2. How has the partnership affected the school environment?

Data Collection

The 19 Mentor Teachers involved in the NAU/Sedona Partnership Program completed a survey regarding their perceptions of how the partnership affected their professional development (see Appendix A). This study focuses on the results of that survey. The survey instrument asked mentors to describe in their own words, "how the partnership has affected your: classroom environment; educational philosophy; elementary students' social, academic, and emotional growth; professional growth; and classroom management." These open-ended response categories enabled mentors to describe their perceptions based on each mentor's professional priorities.

An open-ended survey was also completed by the public school administrators involved in the partnership. These included the principals of the two partnership elementary schools and the superintendent of the school system. The survey asked, "How has the partnership affected your school (district) environment?"

Data Analysis

An examination of the surveys revealed 15 reoccurring responses which were organized into four broad categories for the purposes of analysis and clarity of reporting the results. These categories included: teaching styles, addressing student needs, program influences, and "Additional Themes."

A team of three, two NAU faculty and a graduate student, coded each survey by themes. Raters received category definitions accompanied by examples coded by sub-category. All three reached consensus through discussion on each code to improve inter-rater reliability. The Data Collector software program, a qualitative research tool (Turner & Handler, 1992), aided in analyzing textual data by chunking text into conceptual categories based on assigned codes. The program provided summaries of all data by categories, thus facilitating

qualitative and quantitative analysis. These summaries enabled researchers to identify key ideas within each category and to tally the percentages of respondents mentioning themes.

Survey Results

What follows in Table 1 is a summary of the survey results by categories and related sub-categories. A definition of each category is included in its discussion. The categories serve to organize data, thereby enhancing clarity. In reality, the categories overlap and interact in a synergistic manner. For example, "variety" is a sub-category included under "teaching styles." This sub-category focuses on the repertoire of strategies employed by mentors. Yet, teaching with a variety of instructional strategies facilitates meeting the needs of diverse learners. The decision to code data by one category over another was based on the context of the survey response. Thus, if a mentor's comments focused on the teaching techniques employed, rather than on how those strategies benefited students, researchers coded the data under "variety."

Teaching Styles

This category encompasses the following sub-categories: teaming, variety, and validation. It focuses on how mentors' teaching styles are influenced by participation in the partnership.

Teaming. Teaming involves the collaboration of two or more educators in lesson design and implementation. Sixty-three percent of the mentors stated that having an intern in their classrooms promoted teaming. The described benefits of teaming fell into four areas. First, mentors felt that teaming modeled collaboration for children. This, in turn, contributed to building a positive classroom climate that focused on everyone working together. In addition, teaming provided the mentors with new lesson ideas and reduced the time necessary for planning, thus enabling them to focus more directly on instruction. Finally, the extra hands in the classroom facilitated assisting and monitoring students.

The comments of one mentor captured the synergism between mentor and intern teaming:

> Interns have the desire to do those activities we tend to avoid and usually we don't do those activities because we felt failure when we tried it alone beginning teaching. So combining the mentors' experience and the interns' lack of experience we can provide those needed experiences with success and both the mentor and intern come away from the experience more confident in doing it again. The interns usually provide the desire and work to prepare the lesson and the mentor can

provide the management and wisdom to see where failure could occur and 'ward-it-off,' so success results.

Table 1

Partnership Benefits to Mentors and Administrators (Response totals and percentages by sub-categories)

Categories & Sub-categories	Teachers $N = 19$ (x%)	Administrators $N = 3$ (x%)
Teaching Styles		
Promotes teaming	12 (63)	
Increases instructional variety	7 (37)	2 (67)
Validates beliefs	2 (11)	
Addressing Student Needs		
Increases child-centered focus	15 (79)	
Promotes a positive climate	14 (74)	
Increases adult interactions	6 (32)	
Program Influences		
Increases self-confidence	3 (16)	1 (33)
Promotes self-reflection	15 (79)	1 (33)
Promotes professionalism	6 (32)	3 (100)
Increases collegial interactions	6 (32)	1 (33)
Provides growth opportunities	2 (11)	1 (33)
Additional Themes		
Program expectations:		
Creates a safe environment	10 (53)	
Increases stress	3 (16)	
Focus on basics first	2 (11)	
Need mentorship guidelines	2 (11)	

Variety. Variety refers to using a range of teaching strategies in order to address different learning styles. A little less than half the mentors reported that involvement in the program affected the variety of instructional strategies they used. Their comments highlighted several influences. Mentors stated that the interns gave them new creative ideas that kept them aware of current practices. Some mentors mentioned that they incorporated the new ideas which were consistent with their teaching philosophies, thus expanding their instructional repertoires.

Another mentor shared how this influx of new ideas assisted her in problem solving. "Due to the Partnership, I have at last learned of one method, the Honor Board, that really works for me. Prior to this method, I had changed my technique every year."

Validation. Validation was the third sub-category emerging from the surveys related to teaching styles. Two mentors stated that the partnership served to validate their professional beliefs and practices. The particular beliefs that were validated included: child-centered learning, team teaching, offering a variety of methods and strategies, providing choices, real-world experiences, and integrating the arts. Each of these represents an important component of the program.

In summary, the program affected the teaching styles of mentors in a number of ways. Having interns in their classrooms gave mentors the opportunity to team teach. Teaming provided several benefits, including modeling collaboration, new ideas, reduced planning time, and extra assistance in meeting students' needs. The program also increased the Mentor Teachers' repertoire of instructional strategies. Finally, for some, it validated their child-centered teaching practices.

Addressing Student Needs

The sub-categories encompassed are: child-centered classroom, positive climate, and adult interactions. The data were analyzed to determine to what degree participation in the partnership had promoted a child-centered, positive environment for learning.

Child-centered. Child-centered is defined as "inviting children's whole, real lives into the classroom . . . and it provides a balance between activities that follow children's lead and ones which lead the children" (Zemelman, Daniels & Hyde, 1993, p. 9).

Fifteen out of 19 mentors indicated that having interns in their classrooms was a positive experience, especially because their students received a much greater degree of attention. Many of the comments in this sub-category indicated the value and importance of having interns who would listen to children, immediately address their needs, model appropriate behaviors, and ultimately be available to a greater number of students. As one mentor so succinctly stated, "Naturally, having three adult bodies focused on the social, academic, and emotional growth of each child is more productive than one adult trying to meet all of these needs."

The same 15 mentors felt that by having interns in their rooms they were more conscious of addressing the needs of the whole child by including the multiple intelligences in their lesson planning, as well as a heightened awareness of new ideas, styles and methods which they indicated were beneficial to their students' productivity and emotional

needs. Additionally, mentors responded that having interns in the classroom allowed them to better plan for the individual needs of students, consequently developing appropriate lessons for students who might otherwise be considered at risk.

Included under the sub-category "child-centered" was classroom management because it too creates a supportive learning environment. Ninety-five percent of the mentors felt that additional adults in the room helped with management. One mentor included a personal narrative in an attempt to clarify to what degree classroom management was influenced.

> At the end of my interns' trimester with our class, I had decided to join a table of students while the interns were teaching instead of sitting at my desk evaluating them [the interns']. The hands-on math activity became quite noisy, yet fun and interesting. I realized, had I been teaching the activity, I would have insisted the students be quiet. But since I was participating in the activity and close to the "action" myself, I discovered that learning was occurring although it seemed chaotic. I've learned to appreciate this "good" noise (and to be more tolerant).

Positive climate. Seventy-four percent of the survey responses indicated the positive influence the interns had on their classroom, their students, and the elementary school campus. The word most often used to describe the presence of the interns was "enthusiasm." The enthusiasm of interns reminded mentors of the benefits of their chosen profession.

> The enthusiasm that the interns bring to their assignments remind us "seasoned" teachers of the joy to be found in our profession. My classroom is a warm, friendly, safe place and my interns have helped contribute to this environment through their positiveness, friendliness, and caring ways.
>
> Students' social, academic and emotional growth is influenced by the interns . . . . they've established strong bonds with special needs students and these bonds remain powerful for the children, long after the trimester is over and the interns are gone. Having young adults with us on trips . . . provided yet another positive model of young adulthood for our students.

Overall, the mentors stated that their classrooms were positively energized by the presence of the interns. The elementary students were motivated due to the nurturing environment. Once again, the following statement written by a mentor reflects the philosophy espoused by the program. "Students learn best in a loving, encouraging environment. The interns provide this on a daily basis to our kids."

Adult interactions. Adult interactions refer to more than one adult being responsible for the class. Thirty-three percent of the mentors commented that problems occurred when there was more than one adult in the classroom. The interactions included in this category were: inconsistency in classroom management, lack of teaching clarity, and simple adjustments to student needs. At times, the presence of interns reportedly made teaching more difficult for mentors. One mentor stated that the stress of having interns in her classroom outweighed any potential growth opportunities for her students.

The most difficult aspect of teaching may well be the mastery of classroom management. Two mentors stated:

> Classroom management is one of the most challenging areas in teaching. No matter how much classroom instruction one receives, it's leading the classroom that provides the real experience. Most interns are very green and lack the self-confidence in this area. This has affected my classroom management in a way that requires me to "bear down" on the kids after the interns have gone for the day. The lack of consistency in discipline is difficult for the kids.
>
> Consistency is important. It's hard to be flexible with time when you're working with other people. Planning takes time, a great deal of time. The mentors need to be assertive when necessary for the sake of the students. The classroom students come first. Clear expectations must be presented to interns and students.

Many inconsistencies in classroom management seemed to occur as a result of the inexperience of interns. In some cases, mentors noted an increased level of confidence in interns by the third trimester which positively affected consistency in classroom management. This highlighted the developmental nature of becoming a teacher.

In summary, the presence of interns aided mentors in better meeting the needs of children by providing extra hands, helping with management, and infusing new ideas to address students' learning styles. In addition, interns brought a contagious enthusiasm and energy to the classroom. Finally, the novice nature of interns at times introduced inconsistencies in management and expectations. The fact that these diminished over time modeled the dynamic nature of learning for students and mentors.

Program Influences

This category examines how the program influences the professional development of mentors. Five sub-categories are identified: self-confidence, self-reflection, professionalism, collegial interaction, and growth opportunities. A discussion of each of these follows.

Self-confidence. Eighteen percent of the mentors and administrators commented that involvement in the partnership affected their professional self-confidence. For three of these, participation gave them an increased sense of self-worth. These feelings derived from participation in the program, feedback from interns, and reflection on management practices.

One teacher found mentoring to be "very difficult." The challenge of teaching a new grade level, along with serving as a first year mentor, resulted in feeling overwhelmed. Thus, mentoring combined with a new teaching assignment proved too demanding.

Self-reflection. Four-fifths of the mentors and one administrator reported that the partnership caused them to engage in more professional reflection. The presence of interns frequently asking "why" provoked reflection. One mentor expressed, "It has made me question what I do and how I do it. I ask myself 'why' more often."

Other considerations were identified, including: rethinking goals and objectives, use of positive reinforcement, treatment of different subject areas, and ". . . making sure I have all the parts to a lesson (closure, etc.)." The presence of interns seemed to often act as a catalyst for examining teaching strengths as well as areas needing improvement. In addition, the process of evaluating interns reportedly promoted more self-reflection. "Having to evaluate others, I became more aware of expectations I needed to apply to myself. Kind of fine-tuning my own self-evaluation, sometimes neglected after years of teaching."

Professionalism. The sub-category of professionalism refers to professional behaviors exhibited by mentors in their classrooms. Approximately one-third of the mentors and all of the administrators reported that the presence of interns made them more conscientious about modeling professionalism. "An audience makes us perform our best."

Mentors identified areas which they felt were particularly important to model. These included positive adult interactions, idealism in the classroom, and effective teaching strategies. In addition, one mentor stated that the program created a safe environment for her to take professional risks.

Collegial interaction. Another stated benefit of participation in the partnership was the opportunity for collegial interaction. This included interactions with interns, other mentors, and the NAU faculty. Mentors found "more opportunities to work with colleagues who have truly professional attitudes." Monthly professional development meetings took place as part of the Partnership. These meetings provided a forum

for mentors and university faculty to share ideas, solve problems, and discuss professional issues and concerns. The meetings promoted a sense of camaraderie. As a result, one mentor said, "There is not so much isolation amongst teachers anymore."

These collaborative interactions carried over to the school campuses. One administrator said, "Mentor teachers must learn to give specific, meaningful feedback in a constructive way. This will eventually enable them to have such discussions with their peers after observing each other." Thus, giving feedback to interns laid the groundwork for participating in future peer observations.

Growth opportunities. The final sub-category under program influences is growth opportunities, which were defined as the professional opportunities mentors felt the partnership provided. These include teaching pre-service students, earning district credits or tuition waivers, seeking and receiving honest feedback on teaching effectiveness, creating a personal growth contract, and attending a variety of professional development meetings.

Involvement in the partnership influenced the professional development of mentors in several ways. For some, participation increased their professional self-confidence. Many felt that the presence of interns stimulated self-reflection regarding their teaching practices and encouraged a higher standard of professional behavior. In addition, mentors engaged in more collegial discussions on educational issues and concerns, resulting in a reduced sense of isolation. Finally, mentors took advantage of a variety of growth opportunities offered through the partnership.

Additional Themes

Although not classified as categories, two additional themes emerged and were deemed important enough to warrant inclusion in data results. These were program expectations and mentorship guidelines. "Program expectations" is defined as the degree to which the program met the expectations and desires of the mentors. "Mentorship guidelines" refers to how well the mentors understood their roles and to what degree that understanding led to their success or failure as mentors.

Program expectations. Ten of the 19 mentors acknowledged the "safe environment" created by the NAU team. This safe environment allowed for openness, enthusiasm, empowerment, and an opportunity to build resources. One mentor wrote, "The openness, enthusiasm, and support given to teachers has created a "safe space" where teachers will approach one of you with concerns or questions regarding their teaching or classroom. This allows your teaching to have even more influence."

Three of the 19 teachers surveyed noted the stress level generated by having novice students in the classroom. Words such as hesitance, time-management, flexibility, and assertive behavior were used to describe concerns which elevated stress. As one mentor said, "lack of experience in time management sometimes provides a challenge in terms of completing the tasks at hand."

Two of the 19 mentors who responded to program expectations stated that their educational philosophies had not changed other than the recognition that basics should come first. One mentor worded this particular concern in this way: "After that [teaching the basics], they [the interns] may put in the components necessary to make the lesson(s) work in the classroom."

In summary, the program expectations sifted, naturally, into four strands: stress, management, environment, and academics. It is safe to say that classroom management is a priority because of the inclusion of novice students. On the whole, the program offers a safe environment for all participants, but the stress level rises because of numbers of bodies, lack of experience and time, and that interns must balance skills and activities when presenting lessons.

Mentors described through different ways their total involvement in the program. One teacher captured the essence of the important aspect of mentoring: "I have a strong belief that teachers must extend themselves to provide opportunities for future teachers to be trained."

Mentorship guidelines. Two mentors commented on their desire to have more extensive mentorship training. Both responses explained their feeling of unpreparedness due to a sense of insufficient training or little direction in mentorship.

Implications and Conclusion

The mentor survey findings provide a number of insights into how the professional development of site-based teachers might be promoted. These are summarized below.

1. The many benefits derived from the opportunity for mentors to team with interns suggest that teacher education programs might more consciously focus on teaming as an integral part of training. This could be accomplished in a variety of ways, including professional development on aspects of teaming (e.g., collaborative planning, introducing interns to students, modeling more team teaching by university faculty and mentors, collaborative professional activities, and training interns to work in collaborative contexts).
2. Structuring more opportunities for reflective practice facilitates the professional growth of mentor teachers. Teaching logs, periodic goal setting, and growth contracts are strategies for implementing

and monitoring self-reflection. Furthermore, since reflection requires time, programs also should examine how to include more flexible time for teachers to engage in reflection.

3. Site-based program elements that reinforce and encourage child-centered instruction serve to assist mentors in addressing children's learning needs and model these practices for pre-service and novice teachers. This might be further accomplished by mentors maintaining reflective teaching logs, professional development meetings that focus on related issues, peer observation and feedback, and forums for idea sharing. More structured forums for sharing could be developed, such as a mentor/faculty/intern newsletter and a collaborative notebook of exemplary teaching ideas.
4. In order to minimize any adverse effects of instructional inconsistencies that may result from inexperienced interns teaching in public schools, mentors need to be cognizant of the developmental nature of becoming a teacher. Guided reflections on their own initial teaching experiences evoke empathy and the opportunity to act as a support system for novices. In addition, incorporating stronger pre-service training in classroom management and collaborative problem solving forums provide interns with a framework for developing effective management practices.
5. The professional development of teachers is enhanced by site-based programs that make growth opportunities an integral part of their programs. These opportunities take myriad forms, including periodic growth statements, professional development goal setting and monitoring, action research, collaborative presentations, graduate coursework, and professional issues and concerns forums.
6. Guidelines and training aid mentor teachers in work with interns and reflect program goals. Handbooks, checklists, role playing, and collaborative problem solving facilitate effective mentoring which, in turn, provide opportunities for professional development.

In conclusion, the mentorship role offers teachers many opportunities for professional development. Although this study suggests a number of benefits that derive from mentoring, we strongly acknowledge the impact Mentor Teachers have on the NAU/Sedona Partnership Program and plan to further examine this aspect. Additional research in this area might better define the partnership contexts which appear to facilitate professional growth and explore the longitudinal growth process of partnership participants.

Mentors engaging in professional development model these traits for future teachers. Educators who continuously seek to improve their teaching effectiveness positively influence the children they teach. Within this circle of growth, all benefit.

References

Anderson, E. M., & Shannon, S. L. (1988). Toward a conceptualization of mentoring. Journal of Teacher Education, 39 (1), 38-42.

Goodlad, J. (1988, Spring). School-university partnerships: A social experiment. Kappa Delta Phi Record, 77-80.

Hatcher, M. (1992). Evolutionary steps in CEE's leadership in educational reform. Unpublished concept paper, Center for Excellence in Education. Flagstaff, AZ: Northern Arizona University.

Holmes Group. (1990). Tomorrow's schools: Principles for the design of professional development schools. East Lansing, MI: Author.

Koskela, R., & Ganser, T. (1995). Exploring the role of cooperating teacher in relationship to personal career development. Paper presented at the Annual Meeting of the Association of Teacher Educators, Detroit, MI.

Odell, S. J. (1990). Support for new teachers. In Bey and Holmes (Eds.), Mentoring: Developing successful new teachers (pp.3-23). Reston VA: Association of Teacher Educators.

Parkay, F. W. (1988). Reflections of a protege. Theory into Practice, 27 (3), 195-200.

Stanulis, R. N. (1995). Classroom teachers as mentors: Possibilities for participation in a professional development school context. Teaching and Teacher Education, 11 (4), 331-344.

Turner, S., & Handler, M. (1992). Data collector. Santa Barbara, CA: Intellimation, Library for the Macintosh.

Wilson, E. K. (1995, April). Empowering teachers as full partners in the preparation of new teachers. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Zemelman, S., Daniels, H., & Hyde, A. (1993). Best practice: New standards for teaching and learning in America's schools. Portsmouth, NH: Heinemann.

BEST COPY AVAILABLE

Appendix A
Mentor Survey

How has the Partnership affected your:

Classroom environment -

Educational philosophy -

Students' social, academic, and emotional growth - (please give examples)

Professional growth -

Classroom management -

Please be specific. If there are any particular events that reflect your answers, briefly describe them.

INTEGRATED SECONDARY TEACHER EDUCATION PROGRAM: ON THE EDGE OF PARTNERSHIP

Daniel L. Kain, Michael Tanner, and Peggy Raines[1]

> A symbiotic partnership exists when unlike organisms join intimately in mutually beneficial relationships. To be productive, such partnerships must include the following minimum essentials: (1) complementary dissimilarity between or among partners; (2) overlapping self-interests and the recognition of such by all partners; and (3) commitment among partners to the belief that the potential gains in satisfying self-interests are worth the efforts and inevitable sacrifices of close collaboration. (Goodlad, 1988, p. 78)

For well over a decade, the research literature on restructuring and reforming teacher education has continued to call for the establishment of meaningful school-university partnerships and the identification of the competencies needed by beginning teachers (AACTE, 1983, 1985; Brown & Amsler, 1992; Cruickshank, 1985; Goodlad, 1988, 1990; Koehler, 1985, Reynolds, 1992; Schuttenberg, 1983; Sikula, 1986). In an attempt to respond to these national calls and to a growing local concern that the program in secondary education at Northern Arizona University (NAU) was not adequately preparing teachers for the 21st century, a major program revision effort was begun in 1993.

After more than two years of conceptualization, the Integrated Secondary Teacher Education Program (I-STEP) was implemented in the fall of 1995. Preliminary evaluations indicate that we have taken a significant step toward identifying and promoting the knowledge, skills, and dispositions needed by beginning teachers and toward establishing meaningful partnerships with local schools. Although the ultimate goal of truly symbiotic relationships in these partnerships remains a future vision, we have found that we also have formed many beneficial partnerships within our own college and the university community at large.

I-STEP: Historical Context

In the spring of 1993, six Instructional Leadership faculty members in the Center for Excellence in Education (CEE) at Northern Arizona University began revising the pre-service teacher preparation program, an effort that continued for more than two years and has resulted in the implementation of an integrated program.[2] Some of the initial emerging

---

[1] These authors were listed in this order by random choice. No sequence is implied.

[2] In addition to the authors, faculty members involved in conceptualizing this program revision included Drs. Ann Batchelder, Allison Graber, Harlan Johnson, Sam Minner, Paul Rowland, Linda Shadiow, and Ms. Valorie Neid.

questions included: Why do we need to do anything differently? What are we trying to do? What are we currently doing? How well are we doing it?

A long-standing faculty interest in program revision (dating at least to 1984) received impetus from administrative desires for change. In keeping with the mission of the Center for Excellence in Education "to prepare educational professionals to create the schools of the 21st Century," our department chair urged us to create a program that was unique, without sacrificing quality. We were also under some pressure because our elementary school-based teacher preparation programs, even then, were nationally recognized as reformation leaders, while secondary education had changed very little over time. These pressures, coupled with the ongoing national calls for teacher education reform (Carnegie Forum, 1986; Goodlad, 1990; Holmes Group, 1990; National Board for Professional Standards, 1994), were the initial motivators to rethink, revisit, and revise our existing secondary preparation program.

Initially it appeared that we were simply going to create an alternative track/program from our traditional on-campus program that would serve a small cohort of students and would potentially be primarily school-based. The new high school that was to serve as the partner school was in a small community 40 miles from Flagstaff whose governing board had endorsed the nine principles of the Coalition of Essential Schools (Sizer, 1992). However, within a few weeks the focus became that of creating an innovative campus-based program with a congruent practicum component in the schools, that would begin with one cohort of students, but ultimately become the traditional secondary program. This program could then, at a later point, become totally school-based. Much of this decision was based on the concern that there was evidence that the elementary faculty at CEE had experienced divisiveness over the perceived "worth" of school-based versus campus-based programs. We also felt that we needed to provide several program options for our diverse student population and that each of these options should involve our best thinking.

Our initial revision efforts centered on a comprehensive evaluation of our secondary education program as it then existed. Each faculty member responsible for teaching the undergraduate and post-degree certification courses (High School Teaching Methods, Secondary Curriculum and Principles, Evaluation of Learning, Content Area Reading, and Educational Psychology) presented a thorough synopsis of what content was covered and how these courses were taught. A great deal of conversation ensued regarding overlap of content and effort as well as more critical examination of existing gaps in the current program.

At this stage of the process, faculty members recognized a need for substantive change in the program. We acknowledged that serious

deficiencies currently existed–most importantly, that we were not adequately preparing our secondary candidates to meet the needs of diverse student populations (e.g., differences across gender, ethnicity, culture, mentally/physically challenging conditions, varying achievement levels). Furthermore, we recognized a growing need for our students to become more skilled in the effective use of technology in classroom instruction. And at a practical level, we were becoming increasingly aware of all of the problems that existed within the traditional program concerning the field practicum that was required of all students.

The practicum issue deserves further attention. The students were to be in an assigned secondary classroom in our local school district for 45 hours of observation and practice as part of the High School Teaching Methods class. More and more, as the secondary education department has saturated the local schools, it has become increasingly difficult to find any placement, let alone quality placements with mentor teachers. Though we attempted to give the students meaningful guidelines for their site experiences, there was rarely time in the methods class to really "unpack" what happened at the school site. Moreover, monitoring this experience was nearly impossible. Student placements were arranged by the student services office, not faculty members. University students and cooperating teachers supposedly negotiated visitation schedules, but the process was haphazard and far removed from the university faculty. Lack of remuneration for teachers meant that the program was low on their priorities list.

Students increasingly complained of sitting in a classroom passively observing. Worse, they reported that what they observed had nothing to do with what we were teaching them at the university. Thus the gap between theory and practice continued and the students fell prey to the "two worlds pitfall" (Feiman-Nemser & Buchmann, 1985) where beginning professionals are more than willing to throw out the theory espoused at the university for what is observed in the "real world" of the school classroom, never realizing that much of what they see is far from best practice, but all too often simply the way it has always been done. For their part, many of the public school teachers complained that students dressed unprofessionally and missed appointments or arrived late. Teachers experienced no real benefits in taking a practicum student. And, in fact, each year fewer and fewer have been willing to accept this additional responsibility.

I-STEP: Redesign Considerations

Time/Timing

Addressing the content duplication and gaps among education courses as well as the serious problems with practicum experiences, we began the arduous task of conceptualizing a program that would correct

these deficiencies. Our secondary certification program, as it then existed, was based on students' completing 16 credit hours of professional pedagogy that could be taken any time during the sophomore, junior, and senior years and in conjunction with their major content area coursework. This meant that students came to us in varying stages of their certification process, carrying varying course loads at any given time. One of the earliest questions in program design centered around this idea of time and timing. When should students begin and end the professional coursework and how should the courses be blocked or sequenced?

It was at this time that the faculty realized that if we were to move beyond just tinkering with our existing program to radical redesign, we needed to have total control over the students' schedule for the professional pedagogical semester and that this semester should come immediately before student teaching. This meant that students must have completed their content major/minor course work, all liberal studies requirements and the prerequisites of an educational foundations course, and a speech communication course prior to their I-STEP semester. This design would also include a far better school-based practicum, and ultimately could become totally school-based. This decision truly freed the faculty from thinking about the program in traditional ways.

Framing the Curriculum

Even then, however, our first thinking was that we could probably address some of the curriculum gaps by simply reconceptualizing curriculum within existing courses or reallocating hours to a new course that more specifically addressed diversity and context issues. But the critical question that kept emerging was: *What do we want our graduates to know, be able to do, and be like when they leave our program?* By framing our discussions with the issue of student outcomes, it became clear that before we decided on the form of the program, we must first decide what would drive the design. Thus we began an extensive investigation into what the faculty believed and the literature revealed regarding what comprised the characteristics of effective teachers, including novices.

We examined existing teacher preparation standards (e.g., the National Certification Association for Teacher Education's Knowledge Base Standards and the Council of Chief State School Officers' Standards for Licensing Beginning Teachers) as springboards for identifying the knowledge, skills, and dispositions we wanted our candidates to have to meet the needs of the classrooms of tomorrow. This discussion eventually led to the list of objectives for I-STEP (see Figure 1).

Figure 1
I-STEP Objectives

Pedagogical Knowledge

Students demonstrate an *understanding* of the following:

1. theories of adolescent learning and development
2. theories and principles of curriculum development
3. theories and principles of classroom management
4. theories and principles of instructional methodologies
5. the role of subject area content in instruction
6. the role of context of schooling and instruction (social, historical, philosophical, political, ethical)
7. the role of assessment in instruction
8. issues of diversity and special students in secondary classrooms
9. realities and structures of the teaching profession
10. resources available for use in instruction

Instructional Skills

Students will demonstrate a *proficiency* in the following areas:

1. communicating effectively with others
   (peers, students, faculty, administrators, parents, community members)
2. designing, planning, and implementing instruction
   writing instructional objectives
   lesson planning
   unit and course design
3. using technology and other resources in instruction
4. designing and implementing classroom management plans
5. critiquing and evaluating curriculum documents
6. assessing and evaluating students and classroom instruction
7. motivating students and fostering student learning
8. delivering instruction through multiple techniques
9. organizing and managing use of time for instructional and non-instructional tasks
10. developing habits of mind for professional growth

Dispositions

Students will demonstrate an *awareness* of the following:

1. the value of establishing collaborative and cooperative relationships with students and peers
2. the necessity of continuing professional growth
3. the importance of reflection in instruction and professional growth
4. appreciation for diversity in schools and classrooms
5. the importance of respect for others
6. the need for flexibility and openness to change in school environments
7. the need for goal setting, deliberation, and responsiveness in instruction
8. the need to be environmentally, socially, and ethically responsible members of the profession and society

Once these were identified, we set out to determine the form of instruction that would best accomplish these objectives. It was here that we completely rejected the view of our program as a series of isolated courses taken in sequence, and began to imagine the program as student experiences that would lead to an integrated understanding of learning theory, curriculum, instructional methods, assessment/evaluation, and the contexts in which all of these come together.

BEST COPY AVAILABLE

Through this focus on learning experiences, the program was reconceived as an integrated 16-hour block of professional study that is team taught by faculty members from the Secondary Education and Educational Psychology departments. Three days a week, the 30 student cohort meets on campus. Once a week they meet at one of two school sites (a high school and a middle school), rotating to the other school for half of the semester. At least one faculty member is also present at the school sites to coordinate activities and debrief with students at the end of each day's experiences.

The integrated semester guarantees alignment of course material through team teaching and planning. Formerly fragmented topics are united around experiences and themes/issues designed by the faculty team (Figure 2).

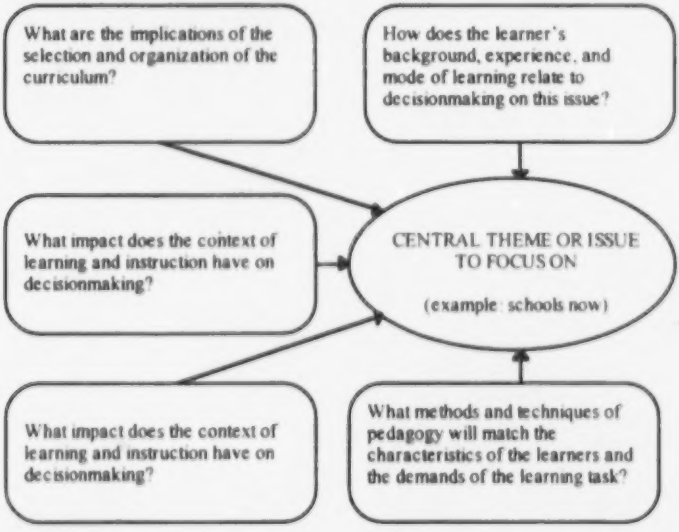
Figure 2
Course Outline

Week	Focus	Questions
1	SELF	What do I believe about learning, teaching, and schooling? How does my experience of secondary schooling compare to schools today?
2	SELF/SCHOOL	How are schools organized? How did schools get to be like this? What is the purpose of schooling?
3 4 5	LEARNERS	Who are the learners in today's schools? What do they do to learn? What skills do I need to develop to reach diverse learners?
6 7 8	TEACHERS	What are the roles of teachers? How do teachers make decisions about planning and instruction? What influences teacher thinking? How do teachers change and develop?
9 10 11	*TEACHING:* TEACHER LEARNER CONTEXT	How do I decide what to teach? How do I decide how to teach? What learning environment is appropriate for my context, subject area, and learners? How do I assess learning appropriately?
12 13 14	CONTEXT	What constraints and expectations do teachers face? What factors beyond the school context affect the learning/teaching experience?
15	PRESENTATION	Preparation and rehearsal of the exhibitions. Reading week.
16	EXHIBITIONS	Presentation of exhibitions

Unnecessary duplication of material is eliminated by planned and coordinated coverage of important concepts. Placing inquiry rather than response in the foreground, the curriculum is experiential and project-based. Five habits of mind, adapted from the Coalition of Essential Schools model (Sizer, 1992), form a guiding framework for this inquiry (Figure 3).

Figure 3
I-STEP Habits of Mind for Developing Professionals

As an inquiry-based program, this course will be grounded in a set of focus questions. Student-generated questions will complement this tentative outline. The I-STEP habits of mind will provide the framework for exploring the focus questions.


What are the implications of the selection and organization of the curriculum?
How does the learner's background, experience, and mode of learning relate to decisionmaking on this issue?
What impact does the context of learning and instruction have on decisionmaking?
CENTRAL THEME OR ISSUE TO FOCUS ON
(example: schools now)
What impact does the context of learning and instruction have on decisionmaking?
What methods and techniques of pedagogy will match the characteristics of the learners and the demands of the learning task?

Student work is directed toward a capstone experience which is a final exhibition that offers students the opportunity to integrate their learning from all the areas of study into a meaningful whole. This exhibition calls on students to present their beliefs and plans for teaching as they would to a hiring committee, incorporating the production of teaching documents and professional presentation.

Creating Experiences and Extending Partnerships

At this point in the redesign efforts, we unanimously committed to an experiential program model and began to identify what campus-

based and field-based experiences should be integral elements of the program. It was at this time (in the spring of 1995), with financial support from our administration, that we were able to identify, recruit, and bring in 25 secondary public school teachers, locally and from across the state, to take part in a one-day workshop at NAU. The majority of these teachers had been teaching for three to five years, with a few in the profession for up to 15 years. We chose teachers in this range because we believed they were past the initial two-year "survival" period, but close enough to their own university preparation to have definite ideas about what could or should be included in these programs. The overall goal of this work session was to have practicing teachers identify and articulate diverse learning experiences, both on and off campus that would develop the knowledge, skills, and dispositions identified as program outcomes.

The teachers were divided into four small groups for each brainstorming task and then reassembled in the large group for debriefing and discussion. Their morning charge was to identify learning opportunities/experiences for the I-STEP students that would take place on the university campus. Not too surprisingly, they found it quite difficult not to return continually to what should happen in the field rather than on campus. Suggestions tended to focus on making the on-campus experience match the realities of the classroom. For instance, to cope with the diversity of students, lesson plans should be created with options to facilitate the success of the diverse learners found in today's classrooms. Another suggestion was to provide increased opportunities to role play and simulate a variety of situations encountered in secondary schools, such as parent-teacher conferences and classroom management problems. A constant thread was that teacher education students should be able to answer the questions: Why do I need to know this? and How does it connect to schooling? We have now incorporated many of the suggestions into our I-STEP curriculum through the use of case studies, videotaped lessons, role playing and simulations, and the constant inquiry into how diversity and school contexts affect instruction, curriculum, and assessment.

The afternoon work was devoted to identifying worthwhile field (school-based) experiences. We guided this endeavor by asking that the teachers not only brainstorm experiences, but also designate what would be learned from each experience. They generated a tremendous number of experiences and rationales that were diverse and yet contained many common themes. Some of the themes that emerged time after time were the broad scope of professionalism and teacher roles, the realities of classrooms and school, and student diversity. Specific experiences that also appeared repeatedly included observing K-12 students, shadowing and interviewing all members of the school

staff, spending time with many different teachers, using videotaping, and observing in a specific classroom over a period of time.

By the close of the day, there was an overall agreement that the university and public schools need to be partners in improving the education of pre-service secondary teachers; that neither effort can satisfactorily stand alone; and that there is a need for coordination of intentions. Many teachers expressed an interest in continued involvement in this process by not only working with the program's student teachers, but also to continue their involvement in the development and implementation of the I-STEP program. Teachers at the session requested a list of names and addresses of participants to continue their own networking.

The NAU faculty certainly gained a renewed confidence in the thinking that had gone into the I-STEP planned experiences and found that generally we had considered nearly all of the teachers' suggestions. Our major tasks then became (a) designing, sequencing, and integrating the key experiences both on campus and in the schools and (b) meeting with local school liaisons to identify the two schools (one middle and one high school) and cadres of teachers who would take the first I-STEP practicum students in the fall of 1995.

I-STEP: The Initial Implementation

Throughout the initial implementation of I-STEP, the recommendations of the teacher advisors and those drawn from the literature became guideposts for the faculty. However, an important theme of this section is that the planning and implementation of a program with even limited partnerships with the public schools soon moves out of the control of university faculty. The involvement of other forces disrupted the typical linear planning process of university programs.

Structures Divided and Connected: Campus and Site Work

As the program was presented to potential students, I-STEP involved a structure that attempted to build on the experiential foundations suggested by the focus group of public teachers. That is, guided experiences on the university campus and in the public schools became the two structural divisions intended to connect the worlds of theory and practice. Tripp (1993) argues that this division is disastrous: "What seems to me to be perhaps the greatest disaster of modern education is an over-dichotomized theory/practice relation: it enables academics to pursue theory without regard to the practical realities of classrooms, and enables teachers to dismiss theory as irrelevant" (p. 16). To address and combat this dichotomy, I-STEP students continually experienced both worlds. They met on the university campus for 3 1/2 hour blocks each Monday, Tuesday, and

BEST COPY AVAILABLE

Thursday; they worked at school sites for five hours on Wednesdays, though some of this time was used as class time as opposed to practicum time. In contrast to the individualized visitation schedules for the traditional practicum, all I-STEP students were in public schools at the same time, addressing the same focus questions (Figure 4).

Figure 4
I-STEP Course and Site Schedule, Fall 1995

Time	Monday	Tuesday	Wednesday	Thursday	Friday
7:45-8:30					
8:30-12:00	NAU	NAU	School Sites	NAU	No classes scheduled
12:00-12:45					

Campus-based experiences and site-based experiences were designed to be complementary. The syllabus organized the I-STEP semester into a progression of learning topics and experiences that followed these foci: self to schools to learners to teachers to teacher/learner/context to contexts (see Figure 2).

Faculty provided I-STEP students with focus questions designed to connect the observations in the schools with the campus experiences. For example, when students were considering self as the focus, the on-campus activity of writing an educational autobiography was paired with a site focus question that asked students to compare their experience in high school or middle school with schools of today. When the campus focus examined learning theory, some of the site focus questions were:

- What does the teacher do to attract and maintain students' attention?
- What does the teacher do that indicates a consideration of the rate at which people learn?
- What does the teacher do to activate prior knowledge?

Each week, I-STEP faculty met to plan the activities for the subsequent week, including the questions and experiences that could integrate the theory and practice. In addition, experts at the schools were invited to address I-STEP students at the schools. Thus, when the I-STEP focus was on the nature and condition of current schools, administrators met with our students at the schools to describe their constraints and opportunities and to interact with I-STEP students.

Student Experiences/Responses

A common finding among those who study student teachers is that at this stage of their development, emerging professionals tend to discount the theoretical and "abstract" concepts and recommendations of their university mentors in favor of the "real life" experiences in the schools and the "practical" mentoring of cooperating teachers (Feiman-Nemser & Buchmann, 1985). To a certain extent, this same phenomenon appeared in the I-STEP experience.

As part of the evaluative data for the program, we asked students to identify a "critical incident" in their development as beginning teachers. Critical incidents are those events that a person identifies as significant in a particular interpretive framework: "To take something as a critical incident is a value judgment we make, and the basis of that judgment is the significance we attach to the meaning of the incident" (Tripp, 1993, p. 8). The instructions were simple: Identify and describe the event from this semester's experience that you see as most significant in your development as a teacher. The categories of events from the first two semesters of I-STEP are presented in Table 1.

Table 1
Critical Incident Reports from I-STEP Students

Type of "critical incident"	Number of incidents **Semester 1 Fall 1995** total: 20	Number of incidents **Semester 2 Spring 1996** total: 21
Site-based (i.e., occurred at or in relation to experience at the public school)	10	13
Campus: completing written assignments	3	1
Campus: classroom event (such as a discussion, interaction, or gradual emerging awareness)	5	3
Campus: microteaching experiences	0	2
Unrelated to I-STEP and semester's work (i.e., didn't follow directions)	2	2

In the first semester of the program, 10 of the 18 critical incidents were events that occurred during school-based experiences; the remaining eight incidents occurred either in campus-based activities or assignments. The second semester, 13 of 21 incidents were school-based experiences. The kinds of experiences students found significant are demonstrated in Table 2.

It is particularly noteworthy that so many of the critical incidents reported were connected to site experiences. Recall that for every hour spent in the schools, approximately four hours were spent in university classes either on campus or at the school sites. Moreover, by the

students' own accounts, a good deal of the activities they observed in schools were repetitive–an observation which provides support for careful monitoring of field experiences, both through the focus given to students and through expanding the university-school partnership so that teachers become more active in varying the experiences of practicum students. The lesson appears to be that experiences in the schools are powerful enough that we need to incorporate them into the core goals of educating professionals. The student who wrote, "Everything we talked about in class in regards to discipline and class management went right out the window," reminds us of the truism Hargreaves (1984) reported among practicing teachers–"experience counts, theory doesn't."

Table 2
Categories of School-based "Critical Incidents"

Experience types	No. Sem. 1	No. Sem. 2
first teaching experiences ("I can do it" reactions)	2	4
positive interactions with professionals ("I can be like this" reactions)	2	2
reports of witnessing negative teaching practices ("can you believe they did this?" reactions)	2	2
positive reports about teachers' relating to kids ("this is the way it should be done" reactions)	3	
generalized reactions to programs ("this is good education" reactions)	1	
interactions with students ("I can have a personal impact" reactions)		4
negative experiences ("can I handle being a teacher?" reactions)		1

Realities of Practice

One of the implications of the initial implementation of I-STEP is a validation of Hargreaves' (1984) position. The I-STEP faculty began the year with high expectations of creating an entirely new practicum experience for our students. The reality we encountered was that participating teachers and school leaders appeared reluctant to alter the traditional teacher-practicum student relationship.

This resistance to change became apparent from the start. Based on the suggestions of the advisory focus group, I-STEP faculty listed a wide variety of experiences we hoped to arrange for our students. Some examples of these include: a scavenger hunt to find the key services of a school, shadowing an administrator or counselor, shadowing a student, and participating in departmental meetings and parent conferences. In addition, we hoped to have public school teachers address I-STEP students on site about their decision-making processes and interactions with students. We hoped to arrange for university professors to teach demonstration lessons and substitute for classroom teachers who would

conduct seminars with the university students. Instead, the school experience, for the most part, consisted of university students' sitting passively at the back of a classroom while the teachers carried on. In this context, it was business as usual.

Resistance to change, of course, is a value-laden concept. What university faculty see as resisting change may be nothing more than survival to practicing teachers, a way of avoiding extra duties in already over-burdened lives; where university faculty see productive opportunities, practicing teachers may see risky self-disclosure. Who, after all, would want to willingly expose oneself to a tradition of critique?

From the start, we attempted to make connections with schools that had been weak or nonexistent. In the traditional practicum relationship, public school teachers saw university students come to visit on erratic schedules, with widely varying degrees of commitment. It was unusual for a teacher to know even the name of the professor associated with any given practicum student. Under the I-STEP program, university faculty members visited the schools before the students ever appeared. We solicited ideas from the teachers about how we could make the program work; we invited the teachers into a partnership for the sake of the profession; we urged the teachers to think about I-STEP in wholly new ways and to involve the students as much as possible. Yet, in the end, most teachers did not use our students in new ways and did not participate as partners in this process. Perhaps, as indicated below, the naiveté of our university assumptions explains the disparity between what we had hoped and what we experienced.

Benefits

Despite the disappointing partnership, the benefits of an even mildly different practicum experience are becoming apparent. From the perspective of the public schools, the I-STEP approach is far superior to the traditional practicum experience. Universally, administrators have reported much greater satisfaction at the schools in discussions with NAU faculty regarding I-STEP. The kinds of advantages administrators cite include the dependability of I-STEP students as opposed to traditional students, the increased professionalism in I-STEP, and–something that may explain the previous advantages–the high visibility of university faculty members at the schools. Teachers gave feedback to the program through a survey instrument. They indicated much greater satisfaction with the revised program.

For university students, the primary advantage of the I-STEP site component may be the guaranteed placement in a secondary school. Over the previous three semesters, as many as 30% of traditional students did not receive practicum placements. In the spring semester of 1996 all I-STEP students received placements. Beyond this, I-STEP

students also experience both high school and middle school contexts, whereas traditional practicum experiences are limited to one or the other. Also, I-STEP students have clear outcomes for their time in the schools. Because their professors are with them at the sites, they also have opportunities to interact at other levels.

From a program perspective, the I-STEP partnership with the schools provides numerous benefits. First, faculty members have been able to develop professional relationships with school personnel that promise enhanced collaboration in the future. As university professors, we have come to know the very people on whom we rely to continue a K-16 learning system. Second, the sites provide a kind of living laboratory for the ideas presented. As we do our job well, we teach our students to become wise consumers of practices, reflective and critical. Each week the students write reflective summaries of what they have witnessed, how it connects to theory, and questions raised by practice. These questions become the focus of large-group discussions. Third, the common focus of each week's experience provides program continuity. Even for students witnessing diverse classes in diverse settings, the focus on a more generic question, yet one that arises from the current learning experiences, allows our students to conduct the sort of dialogue that characterizes professionalism.

In summary, the site component of I-STEP has not been the sort of partnership we intended to make. As university faculty members, we have experienced frustration in trying to bring about radical changes. At times, perhaps, our desire for changes has not adequately honored the culture of secondary schools and the work teachers do. Despite this frustration, I-STEP appears to be on the edge of a meaningful partnership with public schools. There has been progress even in the two semesters of its implementation. Schools, university students, and faculty all have experienced benefits in this step toward partnership.

Evaluation of I-STEP

The evaluation plan for I-STEP incorporates the use of multiple measures. Faculty have adopted the attitude that formative, as well as summative, and qualitative, as well as quantitative, evaluations inform participants about their progress and keep the program vibrant. Following the suggestions of Galluzzo and Craig (1990) when they say "the best scenario is that program evaluation become a collection of small, loosely coupled studies conducted by a variety of faculty members, all of which are designed to gain clearer understanding of the contexts, inputs, processes, and outcomes of the teacher education program" (p. 613), we have three methods of collecting student

feedback and three for public school teachers and colleagues to use. These include the following:

Methods for student feedback	Methods for teacher input
1. Readiness survey	4. Exhibition judging experience
2. Course evaluations	5. Field experience post-survey of teachers
3. First year follow-up survey	6. Comparison of student teaching evaluations

These assessments capture what Ducharme and Ducharme (1993) call "the complexity of assessment once one moves beyond the simplistic paper-and-pencil check-offs" (p. 83).

Each semester begins and ends with a survey of both I-STEP students and students in the traditional program. The survey is designed to assess student perception of readiness for teaching. Students provide anonymous responses to 35 questions. Data are tabulated and written responses to open-ended questions are typed for faculty evaluation. In the pre-survey the traditional students selected are juniors in the first block of required courses in teacher preparation (Curriculum, Content Area Literacy and Educational Psychology). For the post-survey, seniors in the final two required courses (High School Methods and Evaluation of Learning) complete the instrument. Because this was the initial implementation of I-STEP, the student responses for the traditional program did not come from the same population of students, but represented responses of those beginning and those ending the program, just as I-STEP students represent both the beginning and end of the professional preparation.

The survey was constructed after I-STEP faculty listed the knowledge, skills, and dispositions they wanted to include as student outcomes in the program. A question was written for each of the core ideas in teacher preparation (see Appendix A).

The numerical results for survey items provide some tentative initial observations. These are that:

1. The I-STEP program appears to move more students to feeling Very Ready and Ready than the traditional program. I-STEP totals were higher for every question except numbers 6 (organizing class work), 15 (being able to articulate how I teach), 24 (using computers effectively), and 34 (being able to teach conflict resolution techniques). These results were equal to traditional student results.
2. The second semester I-STEP cohort moved more students to Very Ready and Ready than both the Fall cohort and Spring traditional program on every question except 7 (monitoring and adjusting to social and behavioral problems), 10 (using a variety of teaching

techniques), 20 (creating appropriate curriculum for my audience), and 34 (being able to teach conflict resolution techniques). These results were equal to traditional student results.

3. The I-STEP program moved all students to readiness or beyond on all items except for nine students that had one Not Ready response each. The traditional program had 28 items where one to five students marked Not Ready.
4. Teacher preparation sometimes lowers a student's self assessment of readiness. On items 2 (motivating students), 3 (planning for individual needs), 12 (diagnosing ability levels of students), and 31 (coping with the burden of clerical work), fall cohort students marking themselves on the pre-survey as Very Ready fell in number to Ready on the post-survey.

Findings two and four above reflect changes made to I-STEP to respond to the first semester's student evaluations. The effect of these changes appeared again in the open-ended responses. An analysis of the open-ended questions revealed that:

1. I-STEP students in the Fall cohort felt they learned most about teaching models by being in the program (7/21). The Spring cohort listed teaching models (7/23) as well as the field experience (7/23) and assessment ideas (4/23), as being the top three valuable outcomes. (Question #36: "What have been the most valuable aspects of your teacher preparation program?")
2. I-STEP students' concerns after the first semester were classroom management and motivating teens. After the second semester, student concerns included planning a variety of lessons (7/23) and motivation (4/23). Only two of 23 were still concerned with management (question #37: "What are your primary concerns as you prepare for student teaching?").
3. The field experience was perceived as being beneficial the second semester also. The Fall cohort identified seven negatives over and over while the Spring cohort only made two negative comments to this question (question 38: "Comment on how valuable the field component has been for learning the ideas from your teacher preparation classes."). Students continued to see field work as different from NAU "theory" as presented in class, concluding professors must be out of touch. In the second semester we moved students to seeing teachers as sometimes having adapted theory to suit audience and situational constraints. There were still problems with teachers not modeling effective practice.
4. A problem in I-STEP that was not successfully addressed was communication between students and professors about assignments and grading (question # 39: "What do you believe have been the advantages and disadvantages of the block style aspects of I-STEP instruction?"). Fall semester cohorts identified concerns about

assignments (4/21), due dates and grading (6/21). Spring semester cohorts identified disorganization (10/21). This question also identified many positives of I-STEP for students: convenience of taking block of classes (7/23), personal relationships between students (5/23), and seeing the connection between the courses and concepts (5/23).

Every student commented in at least one unique and personal way to all open-ended questions. The tone of individual responses that could not be categorized was positive. There were many individual expressions of gratitude for causing everything from personal reflection to increased professionalism.

Another means of evaluating the program is the review of results from the required student course evaluations conducted in all NAU classes. All students are asked to complete evaluations on a five-point Likert scale for 15 questions in three categories and encouraged to write comments. Results are computer tallied and any written responses are typed before instructor review. All five I-STEP members were evaluated on the same day with five separate bubble sheets. Three months later the results were available for I-STEP faculty review. It is noteworthy that faculty members reported these student evaluations to be generally lower than evaluations from independent classes. While inconclusive at this point, the evaluations will provide data on a regular basis.

A third evaluation will be a survey sent to teachers after their first year of teaching. A directory of new graduates is kept and student friendship networks are used to assist in keeping this list current. Our intent is to capture evaluation of their preparation in light of insights gained during their first year experience. Comparative responses will be collected from I-STEP students and those in the traditional program (see Appendix B).

A fourth evaluation occurs during finals week, which is when the I-STEP students give their final exhibitions. As a component of partnerships, public school teachers and education specialists in university departments help evaluate exhibitions. They are asked to fill out the evaluation questions listed on our survey to refine this judging process (see Appendix C). Response rate has been quite low in this, though the limited responses have been favorable, even when suggestions for changes are made.

A fifth evaluation instrument allows us to hear from teachers who have guided field experiences during the year (see Appendix D). We ask these teachers to identify strengths and weaknesses in the students' preparation as well as field interaction experiences that would benefit novice teachers. At follow-up faculty meetings, NAU professors will discuss ideas with the teachers to continually refine the partnership on training new educators.

And lastly, a proposed future evaluation will be to compare and contrast all student teaching evaluations for those in I-STEP and those in the traditional program for both semesters. Currently, all students are evaluated according to the same evaluation form (see Appendix E), permitting comparison when large numbers of student forms can be processed. The feedback will also be discussed with cooperating teachers to coordinate this last piece of the partnership of preparing teachers.

Conclusion

I-STEP Benefits

Unanticipated partnerships. Even before I-STEP was implemented in the fall of 1995, changes in faculty attitudes and enhanced collaboration were positively influencing our daily lives. Now, after two semesters of team planning and team teaching, we all appreciate the incredible growth we have experienced in our professional practice and collegial relationships. Three of the four full-time secondary Instructional Leadership faculty are actively engaged in this program; one member of the Educational Psychology Department is also a quarter-time team member. This is one of the few cross-departmental partnerships that has been so successful.

Other extremely beneficial partnerships have developed between the I-STEP faculty and teacher educators in each major content department across the university. Dr. Jean McGehee in the Mathematics Department received a small grant that allowed her to attend the I-STEP planning sessions each week and to spend a significant number of hours in the I-STEP classroom. This collaboration has informed and reformed how she teaches her math methods course (eliminating duplication with our courses) and helped us to view our work through a different and informative lens. For example, she has pointed out the limitations of our choice of teaching models for math majors. In addition, faculty members from every teaching major department have served as judges during the students' final exhibitions. This has created channels of communication and new levels of respect between the Center for Excellence in Education and other campus units.

Faculty growth. Working within a program such as I-STEP with its emphasis on partnerships has contributed to faculty changes, too. Working weekly–if not daily–with public school teachers in their schools adds a vibrancy to topics taught in our classes. School reality is infused loudly and clearly and serves as a constant update to the currency of professor behavior and course content. Ideas are exchanged about what works or what fails to work in the classroom and how to adapt a method to suit the population or individual student's needs.

We find ourselves invigorated by the milieu and the interactions possible when we are on a teacher's "turf."

As colleagues, we have grown through team planning and teaching. Often we remark on how difficult it would be to return to teaching the classes in isolation from one another. We enjoy and learn from each other's classroom presence, style, and techniques–a benefit we had no opportunity to experience before I-STEP. The comfort level has increased so that we can slip comments and observations (even disagreements) into one another's presentations without irritation or competition. Most importantly, we have a sense of pride in one another and the program to which we all contribute.

Continuing Concerns

Funding. Funding is always an issue in changing programs. We feel we could benefit from more staff, due to the time-intensive nature of field-based programs. Also, additional moneys to involve more school personnel would open doors in the partnership venture. For example, if we had the funding to include a secondary teacher for a school year as a member of I-STEP, we are convinced we would be able to move the school experiences forward at a much quicker pace. As Mignon McLaughlin is reported to have said, "There are a handful of people whom money won't spoil, and we count ourselves among them." Agreed.

Time intensiveness. The issue of time intensiveness creates a second concern for two of the full-time faculty members who are non-tenured. Over three years of commitment to developing and implementing this program have required hundreds of hours of research, deliberation, planning, coordinating, recruiting, and now teaching. The traditional university reward structure continues to demand performance in the three traditional areas of teaching, research, and service with no delineated recognition for program/curriculum revision. Soder's (1990) analysis of the data that came out of the Study of the Education of Educators regarding this issue clearly recognizes that a discrepancy "between perceptions of what the institution says is important as an institutional mission and perceptions of what it says is important for tenure" (p. 706) creates dissatisfaction, stress, and a "perceptibly weakened morale" (Bowen & Schuster, 1986). The jury is still out on whether this program initiative has been detrimental to our university careers.

Notion of partnerships. The Goodlad (1988) notion of partnership that provides the epigram for this piece highlights the symbiotic relationship of true partnerships. Our experience in I-STEP does not yet warrant the use of that biological metaphor for

BEST COPY AVAILABLE

partnerships. We are left with lingering questions: What are the real benefits for participating public school teachers? Must we rely on altruism and a vague commitment to the profession, or are there more immediate and practical rewards for participating? Do the teachers really want to form partnerships? Our vision of providing in-service growth experiences for teachers has not materialized, and what we see as potential benefits may very well be non-issues to the teachers. In the most basic sense, the I-STEP experience is still on the edge of a symbiotic partnership, with many benefits for university students and fewer obvious benefits for schools and teachers.

Implications for Program Redesign

The creation and implementation of I-STEP has been a lengthy and difficult process, and the ultimate benefits of the redesign are still in question. The answer to whether our increased partnership with schools is producing better teachers seems to require a long-term perspective.

The lessons of program redesign emerging from I-STEP are, however, becoming clear. First, the collaborative approach to redesign has been central in this process. Although not all secondary faculty members have elected to teach in I-STEP, all members were involved in the conceptualization and planning for the new program. In addition to enhancing the final I-STEP design, such widespread involvement also encouraged support for the new program and critical reexamination of the traditional course offerings.

At another level, we found cross-campus collaboration both rewarding and difficult to promote. Some colleagues joined us in the redesign process; others erected barriers to the innovation, based on legitimate concerns about how their students and faculty workloads might be affected. We found that as our redesign became more radical, opposition grew. Yet, as the same faculty members participated in the program (through judging exhibitions, for example), they became more supportive.

Program redesign demands patience and clear communication. I-STEP was not simply an internal change--it affected other departments too. Twelve department advisors had to understand and support the program, student advisement sheets had to be rewritten, and the needs of particular subject areas had to be addressed.

The redesign process highlights the difficulty of coordinating university and school cooperation. Although teachers were invited to participate early on in the process of designing I-STEP, the ownership of the program is clearly with the university faculty members. Teachers eagerly contributed to program ideas in the campus-based focus groups. However, our ongoing attempts to involve cooperating teachers in suggesting new field experiences or sharing their expertise with larger

groups of I-STEP students have generally failed, and we continue to strive for more active participation from cooperating schools.

Finally, the I-STEP experience reaffirms the need for extra administrative support in order to innovate. Without some flexibility in load assignments, without the support of a graduate assistant, without the symbolic support of public acknowledgments from the administration, it is unlikely that our innovation could have moved beyond the conceptualization stage.

References

AACTE. (1983). Educating a profession: Extended programs for teacher education. Washington, D. C.: American Association of Colleges For Teacher Education.

AACTE. (1983). Educating a profession: Profile of a beginning teacher. Washington, D. C.: American Association of Colleges For Teacher Education.

AACTE. (1985). A call for change in teacher education. Washington, D.C.: American Association of Colleges For Teacher Education.

Bowen, H. R., & J. H. Schuster. (1986). American professors: A national resource imperiled. NY: Oxford University Press.

Brown, P., & Amsler, M. (1992). Future directions for school/college collaboration. Policy Briefs, San Francisco, CA: Far West Laboratories.

Carnegie Forum on Education and the Economy. (1986). A nation prepared: Teachers for the 21st century. New York: Author.

Cruickshank, D. R. (1985). Models for the preparation of America's teachers. Bloomington, IN: Phi Delta Kappa Educational Foundation.

Ducharme, E. R., & Ducharme, M. K. (1993, March-April). Editorial: Further prime issues. Journal of Teacher Education, 44 (2), 82-83.

Feiman-Nemser, S., & Buchmann, M. (1985). Pitfalls of experience in teacher preparation. Teachers College Record, 87 (1), 53-65.

Galluzzo, G. R. , & Craig, J. R. (1990). Evaluation of preservice teacher education programs. In R. W. Houston (Ed.), Handbook of research on teacher education (pp. 599-616). New York: Macmillan.

Goodlad, J. I. (1988, Spring). School-university partnerships: A social experience. Kappa Delta Phi Record, 77-80.

Goodlad, J. I. (1990). Teachers for our nation's schools. San Francisco: Jossey- Bass.

Hargreaves, A. (1984). Experience counts, theory doesn't: How teachers talk about their work. Sociology of Education, 57 (4), 244-254.

Holmes Group. (1990). Tomorrow's teachers. East Lansing, MI: Author.

Koehler, V. (1985, January-February). Research on preservice teacher education. Journal of Teacher Education, 36, (1), 23-30.

National Board For Professional Standards. (1994). What teachers should know and be able to do. Detroit: National Standards Board.

Reynolds, A. (1992, Spring). What is competent beginning teaching? Review of Educational Research, 62 (1), 1-35.

Schuttenberg, E. M. (1983, July-August). Preparing the educated teacher for the 21st century. Journal of Teacher Education, 34 (4), 14-17.

Sikula, J. (1986). Visions of reform: Implications for the teaching profession. Reston, VA: Association For Teacher Educators.

Sizer, T. R. (1992). Horace's school: Redesigning the American high school. Boston: Houghton Mifflin.

Soder, R. (1990). How faculty members feel when the reward structure changes. Phi Delta Kappan, 71 (9), 702-709.

Tripp, D. (1993). Critical incidents in teaching: Developing professional judgement. London: Routledge.

Appendix A

Teaching Preparation Survey
December 1995

Demographic Information:

Write in your: Major_____ Minor_____ class

What is your age group? 20-25___ 26-30___ 31-35___ 36-40___ 40+___

Are you Post Degree? Yes___ No___

Directions: As you begin your block of teacher preparation classes we want you to indicate your level of preparation in some of the knowledge, skills, and dispositions the program offers. Indicate your level of confidence for each item below by circling the appropriate letter.

VR = Very Ready to put into practice
R = Ready to put into practice
SR = Somewhat Ready to practice
NR = Not Ready to practice

Component of teaching	*Level of confidence*			
1. Using classroom discipline strategies	VR	R	SR	NR
2. Motivating students	VR	R	SR	NR
3. Planning and meeting individual instructional needs	VR	R	SR	NR
4. Assessing student work	VR	R	SR	NR
5. Relating with parents	VR	R	SR	NR
6. Organizing class work	VR	R	SR	NR
7. Monitoring and adjusting to social and behavioral problems of individual students	VR	R	SR	NR
8. Coping with teaching load and limited preparation time	VR	R	SR	NR
9. Maintaining professional relations with colleagues	VR	R	SR	NR
10. Using a variety of teaching techniques and methods	VR	R	SR	NR
11. Understanding school policies and rules	VR	R	SR	NR
12. Diagnosing ability levels of students	VR	R	SR	NR
13. Teaching assigned content area material	VR	R	SR	NR
14. Coping with cultural diversity of students	VR	R	SR	NR
15. Being able to articulate how I teach and why it's effective	VR	R	SR	NR
16. Identifying and using techniques for delivering effective instruction to included special education students	VR	R	SR	NR
17. Setting up a productive classroom environment	VR	R	SR	NR
18. Nurturing student self confidence	VR	R	SR	NR
19. Teaching students literacy skills for my content area	VR	R	SR	NR
20. Creating appropriate curriculum to teach my audience	VR	R	SR	NR
21. Evaluating curriculum for appropriateness for my students	VR	R	SR	NR
22. Being able to reflect upon teaching and make adaptations as needed	VR	R	SR	NR
23. Making and delivering effective and varied unit and lesson plans	VR	R	SR	NR

24. Using computers effectively within daily content lessons	VR	R	SR	NR
25. Incorporating a variety of instructional technology into my lessons	VR	R	SR	NR
26. Demonstrating knowledge of curriculum: what to teach and when	VR	R	SR	NR
27. Operating effectively within school power hierarchies to get what I need	VR	R	SR	NR
28. Knowing my teacher rights and responsibilities	VR	R	SR	NR
29 Using my professional organizations to become the best professional I can be	VR	R	SR	NR
30. Knowing how adolescents learn and matching appropriate instruction to their needs	VR	R	SR	NR
31. Coping with the burden of clerical work	VR	R	SR	NR
32. Knowing how to discipline a student and follow through school procedures to successful resolution	VR	R	SR	NR
33. Making effective use of textbooks and other informational media	VR	R	SR	NR
34. Being able to model and teach effective conflict resolution techniques with students	VR	R	SR	NR
35 Modeling and promoting collaborative learning relationships	VR	R	SR	NR

Written response items: Please take a moment and write your thoughts in response to the following questions..

36. What have been the most valuable aspects of your teacher preparation program?

37. What are your primary concerns as you prepare to student teach?

38. Comment on how valuable the field component has been for learning the ideas from your teacher preparation classes:

39. (If you're in I-STEP answer this question.) What do you believe have been the advantages and disadvantages of the block style aspects of I-STEP instruction?

40. (If you're in the traditional campus Secondary Ed. program answer this question.) What suggestions would you make for modifying the teacher education program?

Thank you for your input!

Appendix B

Evaluation of Teacher Education Program
Center for Excellence in Education

Part I: Personal Information-Student Teacher

Directions: Please check (√) the appropriate response(s) and return the questionnaire in the enclosed envelope.

A. My BS Ed degree will be in the field of (music, elem ed.)
List_____

B. I will earn my BS Ed degree in 19___.

C. My current student teaching position is: (specify)

_____ 1.elementary education (1-8) 1. grade level _____
_____ 2.secondary education (9-12) 2. content area _____
_____ 3.special education 3. specialization _____

D. I am student teaching in my major area of preparation.
_____1. yes _____2. no

E. Five years from now I expect to be teaching.
_____1.yes _____2. no

F. I plan to continue my graduate studies in education.
_____1. yes _____2. no

G. The enrollment of my school is:
_____1. under 500 _____3. between 1,000 & 2,000
_____2. between 500 & 1,000 _____4. over 2,000

H. The population of the community in which I student teach is:
_____1. less than 25,000 _____3. betwen 50,001 and 100,000
_____2. between 25,001 and 50,000 _____4. over 100,000

I. I would be willing to have a confidential ATRP on-site observation during the next school year.
_____1. yes _____2. no

J. I entered Northern Arizona University as a:
_____1. freshman _____4. senior
_____2. sophomore _____5. post degree (certification only)
_____3. junior

K. I am looking for a teaching position through the Placement Office at Northern Arizona University.
_____1. yes _____2. no

L. I plan to teach
_____1. in Arizona _____2. out of Arizona

Part II: Teacher Education Skill List

Directions: Below are listed instructional skills required for certification by the Arizona State Board of Education. Now that you have had some experience in the classroom we would like your perception of how well prepared you were to use these skills. Using the Rating Scale circle the appropriate column. Please respond to each item.

Rating Scale

6 -Very Strongly Agree
5 -Strongly Agree
4 -Agree
3 -Disagree
2 -Strongly Disasgree
1 -Very Strongly Disagree

MY EDUCATION AT NORTHERN ARIZONA UNIVERSITY PREPARED ME TO:

A. Classroom Management:	VSA	SA	A	D	SD	VSD
1. Organize and manage a classroom to make maximum use of instructional time	6	5	4	3	2	1
2. Manage time, space, materials, and equipment for instruction.	6	5	4	3	2	1
3. Demonstrate methods for creating and maintaining a climate that promotes student self-motivation.	6	5	4	3	2	1
4. Demonstrate skills in the selection and use of resources to facilitate achieving goals and objectives.	6	5	4	3	2	1
5. Demonstrate the use of instructional equipment.	6	5	4	3	2	1
6. Utilize computers in education.	6	5	4	3	2	1
7. Demonstrate ability to work with individuals, small groups, and large groups.	6	5	4	3	2	1
8. Implement learning activities in a logical sequence.	6	5	4	3	2	1
9. Demonstrate methods for involving students in the decisionmaking process.	6	5	4	3	2	1
10. Demonstrate appropriate discipline techniques for effective student management.	6	5	4	3	2	1
11. Use acceptable written and oral expression.	6	5	4	3	2	1
12. Provide appropriate assessment feedback to students.	6	5	4	3	2	1
13. Instruct students in how to listen and communicate.	6	5	4	3	2	1

B. Curriculum and Instruction						
14. Demonstrate a knowledge of the school subject being taught and demonstrate its relevance.	6	5	4	3	2	1
15. Demonstrate the ability to use interdisciplinary approaches to school curriculum.	6	5	4	3	2	1
C. Assessment and Evaluation						
16. Diagnose and use information about the needs and progress of individual learners.	6	5	4	3	2	1
17. Plan instruction to achieve selected objectives.	6	5	4	3	2	1
18. Select and/or construct test(s) to measure desired performance outcomes.	6	5	4	3	2	1
19. Demonstrate ability to make and follow a prepared lesson plan.	6	5	4	3	2	1
20. Identify exceptional students and demonstrate a knowledge of the referral process.	6	5	4	3	2	1
21. Identify and use techniques for delivering services to handicapped students.	6	5	4	3	2	1
D. Growth and Learning Theories						
22. Demonstrate alternative techniques of instruction when a goal or objective has not been achieved.	6	5	4	3	2	1
23. Demonstrate knowledge of psychological foundations and principles.	6	5	4	3	2	1
24. Demonstrate knowledge of current principles of learning.	6	5	4	3	2	1
25. Identify and demonstrate methods to promote student self-image.	6	5	4	3	2	1
E. Educational Foundations						
26. Organize instruction to account for individual differences among learners.	6	5	4	3	2	1
27. Demonstrate skills necessary for working with students from various cultural backgrounds.	6	5	4	3	2	1
28. Demonstrate knowledge of curriculum development to include scope and sequence.	6	5	4	3	2	1
29. Demonstrate knowledge of history and philosophy of education.	6	5	4	3	2	1

F. Organization, Administration, and Other

30. Demonstrate professional responsibilities.	6	5	4	3	2	1
31. Demonstrate knowledge of procedures necessary for achieving staff support.	6	5	4	3	2	1
32. Identify techniques and strategies for parent-teacher conferences	6	5	4	3	2	1
33. Demonstrate knowledge of teacher rights and teacher responsibilities (legal and professional).	6	5	4	3	2	1

PLEASE NOTE THE FREQUENCY, AND RATE THE SUPERVISION OF YOUR STUDENT TEACHING:

G. Student Teaching

34. The quality of the assistance provided by the university supervisor was excellent.	6	5	4	3	2	1
35. The quality of the assistance provided by your public school cooperating teacher was excellent.	6	5	4	3	2	1

36. How many visits were made by your university supervisor? ____

37. Approximately how much time did the university supervisor spend observing you each visit?
    ( ) Less than 30 minutes
    ( ) 30 to 60 minutes
    ( ) more than 60 minutes

38. About how much time did the university supervisor spend conferencing with you about your teaching, etc., each visit?
    ( ) Less than 30 minutes
    ( ) 30 to 60 minutes
    ( ) more than 60 minutes

Part III: Recommendations

Directions: We appreciate your taking time to respond to the following questions as fully as possible.

1. What do you perceive to be the strengths of the teacher education program at Northern Arizona University?

2. What recommendations would you make for the improvement of the teacher education program?

3. Now that you are teaching, which of the following do you consider to have been the most helpful in preparing you to deal with the reality of the classroom situation? (Please rank from 4-1, 4 being highest)

	(Please circle)			
	High			Low
• content preparation	4	3	2	1
• field experience	4	3	2	1
• methods classes	4	3	2	1
• student teaching	4	3	2	1

Thank you for taking time to respond to these questions. We believe that this information will be of great value as we seek ways to strengthen the teacher education program at Northern Arizona University.

Appendix C
Instructions to Judges and Judge Response Form

Instructions to Judges

Thank you for agreeing to judge this exhibition of student achievement from the Integrated Secondary Teacher Education Program. Your expertise is vital to the success of this important activity.

On the next page you will find a description of the exhibition instructions given to the students. Essentially, the student will put together an exhibition that attempts to describe their ideal classroom in the future. Their presentations should take into account changing demographics and appropriate educational practices (e.g., inclusion). The exhibit includes a visual component (poster display with a video sample), a prepared oral presentation, and a question-and-answer session. Rubrics for these components are included with this packet.

As you judge the exhibit, consider two important instructions given to students. First, they are to assume they are presenting their best thinking to a school hiring committee. As a listener, you might assume the role of a member of this committee, asking yourself what sort of contribution this person might make to your school. Second, the students have been asked to address five habits of mind (copy enclosed) in this presentation. These habits of mind are important questions for teachers to think about. They provide a heuristic that brings out matters of curriculum, assessment, learning, contexts of schooling, and teaching methods. You might consider these habits as a means of asking questions of the exhibitor.

The question-and-answer session is a vital component of this demonstration of learning. Some suggested questions are listed below. However, you should feel free to ask any questions that may arise as a result of other components of the exhibition. Also, please ask any questions you feel a beginning teacher in this field ought to address.

Sample questions:

- *If your class demographics shifted to X (describe), what changes would you make?*
- *Explain why you chose this objective (list) for your unit plan.*
- *Could you elaborate on why you've chosen this particular assessment approach? When would you see X (describe) as a defensible means of assessment?*
- *Your teaching sample was a good example of (name model) teaching. What other methods would you use? Why?*
- *Describe how you think the context of your school has influenced your decision making.*
- *Some teachers in your area spend a lot of time doing X (describe). How do you feel about this?*
- *What would be your greatest contribution to the work culture of this school?*
- *How do you plan to grade students fairly?*
- *What indicators do you think are most important for judging the success of a teacher?*
- *I see by your student evaluations that some students think you are too X (describe). Do you see this as a weakness or a virtue?*

When deciding upon a score for each rubric category, it may be helpful to think about these guidelines. A **4** indicates an outstanding candidate for a teaching career; a **3** indicates a strong candidate; a **2** indicates this candidate is someone who should be licensed to teach, but is not particularly strong. A **1** indicates you do not think this person is competent to teach according to the component under consideration.

We invite your comments in reaction to the judging of the exhibitions:

Comments about the exhibition experience (for you and/or students):

Comments about the materials provided you for judging:

Comments about what this tells you about the I-STEP program:

Appendix D:
I-STEP Feedback Form

School:_____

Thank you for your participation in helping an I-STEP student this year. We are interested in your feedback regarding the program. Could you please take a moment to respond to the following questions?

1. The I-STEP field structure allowed ample opportunities for me to interact with the university students. 1 2 3 4 5
Comments:

2. I-STEP allowed the university students to be exposed to the realities of secondary teaching. 1 2 3 4 5
Comments:

3. I-STEP provided university students ample opportunities to work with and interact with public school students. 1 2 3 4 5
Comments:

4. I was aware of the site focus questions the students inquired about each week. 1 2 3 4 5
Comments:

5. Recommendations for better interaction between I-STEP and the school:

6. Recommendations for meaningful experiences for I-STEP students at your school:

7. Ways the university faculty can support the school in cooperation with I-STEP:

Appendix L:
NAU Student Teacher Evaluation Form

Northern Arizona University Center for Excellence in Education

STUDENT TEACHING EVALUATION (please check appropriate)
_____MID-TERM _____FINAL

Student Teacher:	_____	Social Security #:	_____
Cooperating Teacher:	_____	Cooperating School:	_____
Subject/Grade Level:	_____	School District:	_____

Instructions: On the form below, circle the number that typifies the level of performance of your student teacher. Please comment on as many areas or skills as possible. Please use the following numerical classification: 0-Not applicable OR Not observed; 1-Unsatisfactory; 2-Below average; 3-Average; 4-Above average; 5-Outstanding. Press firmly to ensure legibility on all copies. After completing this form, please keep your copy, then give the appropriate copy to the student teacher.

Classroom PersonalSkills						
Is confident when teaching.	0	1	2	3	4	5
Is perceptive of students' problems.	0	1	2	3	4	5
Uses reinforcement consistently.	0	1	2	3	4	5
Motivates students through encouragement.	0	1	2	3	4	5
Has disciplined control of the students.	0	1	2	3	4	5
Responds professionally to crises.	0	1	2	3	4	5
Communication Skills						
Conveys an accurate picture of students' performance.	0	1	2	3	4	5
Uses proper English.	0	1	2	3	4	5
Uses test data to plan instruction.	0	1	2	3	4	5
Defines and prioritizes goals for instruction.	0	1	2	3	4	5
Selects methods and materials that are consistent with objectives.	0	1	2	3	4	5
Adapts media and materials to fit the needs of students.	0	1	2	3	4	5
General/Personal						
Accepts evaluative feedback andbehavior accordingly.	0	1	2	3	4	5
Recognizes and corrects errors.	0	1	2	3	4	5
Demonstrates initiative.	0	1	2	3	4	5
Fulfills requirements of attendance and punctuality.	0	1	2	3	4	5
Maintains an appropriate appearance.	0	1	2	3	4	5
Works well with colleagues.	0	1	2	3	4	5
Communicates professionally with parents.	0	1	2	3	4	5
Instructional Skills						
Uses appropriate vocabulary when giving directions.	0	1	2	3	4	5
States expectations to students.	0	1	2	3	4	5
Presents concepts clearly.	0	1	2	3	4	5
Uses time efficiently.	0	1	2	3	4	5
Focuses students' attention on task.	0	1	2	3	4	5
Models basic skills appropriately.	0	1	2	3	4	5
Uses manipulative materials.	0	1	2	3	4	5
Encourages active learning.	0	1	2	3	4	5
Varies instructional methods.	0	1	2	3	4	5
Provides appropriate lessons.	0	1	2	3	4	5
Informs students of errors.	0	1	2	3	4	5
Implements efficient transitions between activities.	0	1	2	3	4	5

BEST COPY AVAILABLE

Prepares and has available all necessary instructional materials.	0	1	2	3	4	5
Maintains accurate records adjustsregarding students' learning	0	1	2	3	4	5
Adjusts physical environment to meet the needs of students.	0	1	2	3	4	5

Comments:

Please use the following space to describe your student teacher's performance of assigned duties and personal qualities related to teaching.

_____

_____

Evaluation given by (check one):

____UNIVERSITY SUPERVISOR

____COOPERATING TEACHER

_____

Evaluator's Signature Date

_____

Student Teacher's Signature Date

RETURN TO:

Coordinator of Student Teaching
Center for Excellence in Education
NAU Box 5774
Flagstaff, AZ 86011

COPIES:

White & Green: Student Teaching Office
Canary: Cooperating Teacher
Pink: Student Teacher
Golden rod: University Supervisor

80

PREPARING SPECIAL EDUCATION TEACHERS FOR RURAL AREAS: THE RURAL SPECIAL EDUCATION PROJECT

Greg Prater, Susan Miller, and Sam Minner

Special education teachers working in rural areas face many challenges that often lead to an estimated turnover rate for teachers in rural areas of between 30% and 50% (Helge, 1979). Lancaster (1992) surveyed 45 rural school districts on Arizona Indian reservations and found the average turnover rate of special educators was 35% with some schools reporting a 100% turnover rate. Most of these schools were located in very isolated areas. A number of stressors have been identified that result in recruitment and teacher retention problems in rural areas. These stressors include problems associated with working with parents as well as geographical and cultural factors (Helge & Marrs, 1981). Other issues encountered by special educators in rural areas include lack of funding (Helge, 1980a) and professional and social isolation (Helge, 1980b).

Few special education teacher preparation programs prepare teachers to teach in rural areas (Helge, 1983). Only about 10% of colleges and universities offer any training directly related to teaching in rural areas (Jones, 1986). A few programs have been developed over the years such as the Rural Teacher Improvement Project (Spuhler, 1989) and the Teachers for Rural Alaska Program (Kleinfeld & Noordhoff, 1988).

Moss (1991) has specifically addressed the problems associated with preparing teachers to work with Native American children and their parents. He indicated that many teachers working on rural reservations have not been adequately prepared to succeed in those schools or in the Native American culture. Recognizing this problem, the Office of Special Education Programs (OSEP) in the U.S. Department of Education[1] has funded numerous programs in recent years to increase the number of qualified teachers on reservations. Baker (1994) reviewed 150 OSEP projects that focused on Native American students. These projects included parent training projects, pre-service and in-service teacher training programs, and projects focusing on paraprofessional needs-related service projects. Even though there have been tremendous efforts made in this area, much work still remains. There are still many unqualified teachers working on American Indian reservations and retention of qualified teachers continues to be a major issue.

---

[1] The Rural Special Education Project was supported by a grant to the Center for Excellence in Education at Northern Arizona University from the U.S. Department of Education, Office of Special Education and Rehabilitation Services, Division of Personnel Preparation (#HO29B50069). Additional support was provided by the Kayenta Unified School District. The opinions expressed in this article are those of the authors and do not necessarily reflect positions of the USDOE or KUSD.

Because of the need to increase the number of qualified teachers to teach Native American children in rural areas, Northern Arizona University (NAU) special education faculty developed the Rural Special Education Project (RSEP). As a result of an extensive literature review and our experiences, we believe that the best preparation of teachers for rural and reservation areas is one that is field-based and experiential, and one that immerses students in the Native American culture. We wanted the focus of the program to be on praxis–the combination of theory and practice. Ultimately, RSEP was developed as a partnership between the Center for Excellence in Education (CEE) at NAU and the Kayenta Unified School District (KUSD).

Kayenta is located approximately 150 miles northeast of the NAU Flagstaff campus. Kayenta is accessible by a paved two-lane highway. During the winter, road conditions can become very hazardous, but regardless of weather conditions, one must be careful when driving on the reservation since much of it is open range. It is common to see sheep, cattle, and horses on the road. Kayenta, with a population of about 5,000 people, is one of the largest reservation communities. The vast majority of its residents are Navajo. A few members of the Ute and Hopi tribes also live in Kayenta. There are two grocery stores, two motels, and several restaurants and gas stations in town. Outside of town, some residents live in hogans, the traditional dwellings of the Navajo people.

Kayenta was chosen as our site for several reasons. Kayenta is definitely rural and we wanted to make sure our students had a rural experience. Also, the administrators and teachers were very supportive of the program. For example, the school system donated KUSD faculty apartments for our students and the project manager. Kayenta is located deep within the Navajo reservation borders. We felt this would help ensure that our students were immersed in the Navajo culture. Lastly, KUSD practices full inclusion. We thought this would be an excellent opportunity for our students to experience full inclusion as a service delivery model for special education.

Overview of the Rural Special Education Project

RSEP was developed to prepare pre-service teachers to work effectively with Native American students, their families, and others who live in rural areas. The major elements of the project are: (a) selection and orientation of participants, (b) university classes, (c) classroom experience, and (d) cultural immersion.

RSEP was designed to provide all special education courses required for certification. Following completion of RSEP, students must finish the remaining graduation requirements for their B.S. in Education including elementary certification courses.

Selection and Orientation of Participants

Each year up to 18 participants are selected for the project. Approximately half of the participants are selected from the NAU Flagstaff campus and half from the Kayenta community. Students from the Flagstaff campus apply by completing an application and writing an essay detailing why they want to be involved. These students are then interviewed by a panel of NAU education faculty for final selection. Faculty look for interest in working in a rural area and in cultural diversity, as well as the quality of the essay and grade point average. These students are typically Anglo females in their early twenties who are following the traditional path toward an undergraduate degree and teacher certification.

The participants from Kayenta are paraprofessionals who are employed by the Kayenta Unified School District. The typical student is a Navajo female in her thirties who is married and has two or more children. The project director and project manager, who are NAU faculty, assist KUSD administrators in the selection of Kayenta participants. Project personnel rely heavily on the director of special education who has lived in Kayenta for several years and is a well respected Native American within the community. She talks with potential participants, determines their level of commitment and the likelihood that they will complete the year-long program, and makes her recommendations in conjunction with the KUSD building principals.

The students from campus and the Kayenta paraprofessionals form the RSEP cohort. Thus, RSEP represents a partnership between NAU and KUSD. It is through this partnership that Kayenta students are able to receive their special education teacher training while remaining with their families. The Flagstaff students live on the KUSD compound in apartments donated by the school system.

Each fall the Flagstaff students participate in two orientations. The first orientation is on the Flagstaff campus. Special education and Native American faculty members and students make presentations to participants which are intended to convey information regarding the Native American culture and to outline potential issues that could arise during the year. Former students also attend this orientation to speak about their experiences while living in the Navajo Nation.

The second orientation that the campus students attend is in Kayenta. This orientation is designed for all first-year teachers at KUSD. Information regarding the history of KUSD, the culture, and school policy is discussed.

University Classes

During the two-semester program, RSEP students take all of the courses required of special education majors on the Flagstaff campus:

BEST COPY AVAILABLE

foundations and methods of emotional, mental and learning disabilities, behavior management, assessment of students with disabilities, and consultation/collaboration in special education. RSEP includes two additional courses which pertain to working with parents of special needs children and issues in rural special education. The participants take their university classes between 3:00 p.m. and 7:00 p.m. Monday through Thursday in Kayenta.

The project manager typically teaches class three afternoons a week. A faculty member from campus travels to Kayenta to teach one night a week or teaches on Interactive Instructional Television (IITV). Much class time is devoted to reflecting on the students' classroom experience. All Flagstaff students are required to work in the classroom for about four hours a day, five days a week. The Navajo paraprofessionals continue to work their full day in KUSD classrooms.

The project manager also coordinates efforts between students and campus faculty in professional development–an activity expected of RSEP students. Students are paired with faculty and identify a specific issue to investigate. For example, students have studied barriers encountered by Native American students in obtaining university degrees. These investigations have resulted in students and faculty presenting professional papers at state and national Council for Exceptional Children (CEC) conferences, the Association of Teacher Educators (ATE) national conference and others.

Classroom Experience

By the end of the year, Flagstaff students have over 600 hours of classroom experience. The students are required to work from approximately 8:00 a.m. to noon, Monday through Friday in KUSD classrooms. (The KUSD paraprofessionals continue to spend the full day in their classrooms.) For example, they routinely prepare and deliver lessons, assist with classroom discipline, and attend faculty functions. They have two placements, one during the fall semester and another in the spring. The placements are typically at different schools within the district. Placements are made by the KUSD director of special education, building principal, and project manager. The placement is supervised by a master teacher and project manager.

Cultural Immersion

Anglo students in RSEP are immersed in the culture. They hear the Navajo language and interact with traditional Navajo families every day. To enhance this immersion, we pair each Anglo student with a Navajo cultural partner who is asked to sponsor the Anglo student at one cultural event per month. As a result of this, our students have attended Navajo weddings and puberty ceremonies, made jewelry,

sheared sheep, and much more. Some students have traveled to the Hopi reservation to attend Kachina races and other ceremonies.

Visiting the Havasupai reservation is a traditional event for all RSEP students. The Supai village is located at the bottom of the Grand Canyon and is accessible only by horseback, hiking, or helicopter. Each year the students make the 16-mile, round trip hike to Supai to camp and share cultures with the school children there. This experience allows both Anglo and Navajo students to experience another culture.

Other Support For RSEP Participants

The RSEP participants are also provided with other support services. In addition to the project manager, who lives in Kayenta, many other NAU faculty are involved. The project director and project counselor make frequent visits to Kayenta. The director assists the students, for example, by overseeing the budget, student registration, and conference travel. The counselor directs group and individual counseling sessions regarding professional and personal issues. She also helps any Anglo students who may be having difficulty adjusting to life on the reservation.

RSEP Results

The Anglo participants benefit from the RSEP experience in a variety of ways. They have the opportunity to learn about a Native American culture that is very different from their own. They have a high degree of hands-on experience in the K-12 classroom–over 600 hours of direct contact with children. And, they have the professional experience of preparing and presenting papers at important professional conferences.

However, one of the major reasons to develop and implement RSEP pertained to the significant problems associated with the retention and graduation of ethnic minority students, particularly Native Americans, from teacher preparation programs. We hoped that large numbers of Native American students in RSEP would be retained in the program, would graduate from our university, and would ultimately take teaching positions in their home communities. It was our additional hope that these participants would assume leadership positions in their respective schools and serve as role models for other Native American students.

Results from this project suggest that our goals in respect to the retention and graduation of Native American students are being realized. Over the life of the project, 36 Native Americans have completed RSEP. (Ten additional Navajo are currently in RSEP.) All but seven of these participants have been women. Most have been over the age of 30 and nearly all of them experienced very significant family and domestic responsibilities during the time they participated in the project. Several

participants were required to drive long distances to be a member of the RSEP cohort. Others faced financial barriers making it difficult for them to participate. Some students received encouragement from their families and friends to complete the project. Others received little encouragement; a few were even encouraged to leave the program to attend to family and domestic responsibilities. In summary, a variety of barriers made participation in the project difficult for nearly all Native American students in this project. Still, every Native American student completed RSEP. Thus, our retention and completion rate for Native American students in RSEP has been 100%. This finding has been amazing to us. After careful reflection and many discussions with Native American participants, we believe we know why our retention and completion rates have been so high. We believe there are three principal reasons RSEP has been so successful in this respect:

1. The development of a support network for Native American students within their home community.
2. A highly contextualized and culturally relevant curriculum.
3. A focus on the full professional development of project participants.

Development of a Support Network

Students in RSEP enter the program as a cohort. They see each other every weekday. They work closely with each other on many and varied professional activities and are strongly encouraged to work collaboratively and support each other over the course of the program. Classes are offered in the home community of the Native American participants. The support networks that students have developed over the years (e.g., friends, family members) are already in place. We have observed many instances of students considering leaving the program and other students rallying to their support. We have observed, for example, students assisting and supporting each other by offering rides to class, helping out with daycare and/or baby-sitting arrangements, and assistance with difficult class assignments. We believe that these and other supports are very much related to our perfect retention and program completion rate.

Following student completion of RSEP, the RSEP faculty continue to monitor student progress toward the degree. With the exception of four of a total of 36 students, all students who have not completed their undergraduate degree have continued to take required courses, either in Kayenta or in Flagstaff. We remain in contact with the four who are not currently enrolled in courses and continue to advise and encourage them to get back on track.

Development of a Highly Contextualized Curriculum

The teacher preparation curriculum that RSEP students complete is governed by the notion of praxis–the junction of theory and practice. RSEP participants complete a fairly traditional program of study (e.g., a course in assessment of learners, a course in pedagogy, a course in classroom management), but all classes are highly contextualized for the setting in which students live and work. Prior to attending their teacher preparation classes, both Navajo and Anglo students have worked for several hours each day in a real classroom setting. The ideas discussed in class and suggestions offered by instructors are not theoretical abstractions for RSEP students. Ideas and suggestions offered in class are often scrutinized and challenged by our students. We believe that this joining of theory and practice breathes life into the curriculum and actively engages our students in the critical issues in our profession. Students see the relevancy (or lack of relevancy) of classroom work. In sum, they remain interested in the program throughout their experience.

A Focus on Full Professional Development

We also have made many special efforts to actively engage RSEP students in the profession of education. For example, we helped RSEP participants write, submit, and deliver papers at professional meetings. Navajo and Anglo students have been equally involved in the preparation of proposals and presentation of papers. We have delivered these papers at local, regional, and national meetings (Miller, Prater, Black, & Kescoli, 1994; Minner, Tsosie, Newhouse, Owens, & Holiday, 1995). Several of the papers have been published in conference proceedings, in ERIC, or in other sources (Miller, Harrison, Kescoli, Seaton, & Parrish, 1996; Prater, Rezzonico, Pyron, Chischille, Arthur, & Yellowhair, 1995). We have found that students very much enjoy this work. They have expressed to us that this element of their professional growth is particularly meaningful to them and several students have suggested that doing this work has retained their interest in the program.

In addition to the retention and graduation rates of Native American students in RSEP, we have collected a variety of other data related to this project. For example, an analysis of student journal entries (all RSEP students are required to keep a journal while in the program) revealed that Anglo participants unanimously experienced very powerful cultural lessons while in the program. These students believed that these cultural experiences had significant professional as well as personal influences on their lives. Follow-up student data suggest that graduates of this program do tend to remain in rural areas and in many cases tend to continue to serve Native American families.

The following data illustrate the successes of RSEP and its Navajo participants.

- Of the 10 Navajo students in Year One, two are continuing to take required courses offered in Kayenta, two are student teaching in Kayenta, six have completed their B.S. in Education, and two are working on their M.Ed. in Special Education. All of those with degrees were hired as certified teachers by KUSD with two exceptions, one is a full-time graduate student at NAU and one has been accepted into the University of Arizona Speech and Language master's program.
- Of the seven Navajo students in Year Two, three have graduated and are employed in Kayenta, Chinle, and Benson, one is student teaching in Kayenta, two are taking courses in Kayenta, and one has at least temporarily dropped out due to family responsibilities.
- Of the nine Navajo students in Year Three, three are student teaching, three are continuing to take courses in Kayenta, and three are being encouraged to continue.
- All of the nine Navajo students in Year Four have many hours remaining toward their liberal studies and elementary education requirements. They are continuing to take courses part time in Flagstaff in the summer and in Kayenta.

The Anglo students typically have not had the family responsibilities, have not been employed full time, and have been further along in their liberal studies and elementary coursework. Predictably so, a larger number have graduated from NAU. The following data illustrate their progress.

- Of the eight Anglo students in Year One, seven in Year Two, and seven in Year Three, all have graduated and received teaching positions.
- Of these 22 graduates, eight are teaching on three different Arizona Reservations, seven are teaching in Phoenix or Tucson, five are teaching in rural schools, and two are currently otherwise employed.
- Of the six Anglo students in Year Four, one has graduated and is employed by KUSD and five are finishing their coursework at NAU in Flagstaff.

Additional data summarizing the post-graduation status of RSEP students include the following.

- Thirty-seven percent of the Navajo students in the first four years of RSEP have either graduated from NAU (9) or are in their final semester and are currently student teaching (4).
- Of the nine Navajo graduates of NAU, six are employed on the Navajo Reservation and one in Benson, Arizona. Two are in master's programs.

- Eighty-two percent (23) of the Anglo students have graduated from NAU.
- Of the 23 Anglo graduates of NAU, over half are employed by schools on a reservation (8) or by schools in other rural areas (5). Eight are employed in urban areas and two have other employment.

In summary, these data clearly indicate that graduates of RSEP who have completed their B.S. degree do tend to seek teaching opportunities in rural or reservation areas. The Navajo KUSD employees are offered positions by KUSD and approximately half of the Anglo graduates are employed in settings similar to the RSEP location. (It should be noted that the Anglo students' experiences are not limited to Kayenta, as almost all of them student teach in a more urban area in order to have a balance in their teaching experiences.)

Conclusions

We have experienced many successes in RSEP. The retention and graduation rates of RSEP students are very high. Students in the program have had many powerful cultural and professional experiences. They graduate from the program extremely confident in their ability to instruct a wide variety of learners. From our perspective, the reasons to do this kind of work are many and compelling. However, we would be remiss if we did not say something about the challenges of such work. They too are many. RSEP is a relatively expensive program; the U.S. Department of Education funding alone is approximately $115,000 each year. Administrative problems associated with the management of a major off-campus effort are significant and often quite complex. Finding good project managers for RSEP has not always been easy. Still, we are proud of the program and committed to its continuation. We believe we know at least one way to prepare high quality professionals for service in rural areas and service to Native American families–RSEP.

References

Baker, B. (1994). Native American projects funded by Division of Personnel Preparation, Office of Special Education Programs. (Available from B.C. Baker, Division of Personnel Preparation, 400 Maryland Avenue, S.W., Washington, D.C.).

Helge, D. (1979). Final project report of the National Rural Research Project. Murray, KY: Murray State University, National Rural Research and Personnel Preparation Project.

Helge, D. (1980a). National research comparing rural special education delivery systems before and after implementation of the education of all handicapped children's act. Murray, K: Murray State University, Center for Innovation and Development, National Rural Research and Personnel Preparation Project, Grant No: G007801686.

Helge, D. (1980b). National research identifying problems in implementing comprehensive special education programming in rural areas. Murray, KY: Murray State University, National Rural Research and Preparation Project.

Helge, D. (1983). Models for serving rural children with low-incidence handicapping conditions. Murray, KY: Murray State University, National Rural Research Project.

Helge, D., & Marrs, L. (1981). Personnel recruitment and retention in rural America. Bellingham, WA: Western Washington University.

Jones, B. (1986). Preservice programs for rural environments: Survey and recommendations. Research in Rural Education, 4(1), 3-8.

Kleinfeld, J., & Noordhoff, K. (1988). Teachers for rural Alaska program. Fairbanks: University of Alaska.

Lancaster, L. (1992). Recruitment and retention of special education teachers in Native American reservation schools. Unpublished doctoral dissertation, Northern Arizona University, Flagstaff.

Miller, S., Harrison, M., Kescoli, C., Seaton, S., & Parrish, T. (1996). Barriers faced by Navajo mothers in earning their university degrees. Proceedings of the American Council on Rural Special Education. 53-58.

Miller, S., Prater, G., Black, P., & Kescoli, L. (1994, February). Rural Special Education Project. Association of Teacher Educators Annual Conference. Atlanta, GA.(Juried presentation for Distinguished Program in Teacher Education Award.)

Minner, S., Tsosie, J., Newhouse, R., Owens, M., & Holiday, J. (1995, March). Benefits of cultural immersion activities in a special education teacher training program. Paper presented at the

American Council on Rural Special Education Conference, Las Vegas, NV.

Moss, S. (1991, April). Issues in rural special education. Paper presented at the International Council for Exceptional Children Conference, Atlanta, GA.

Prater, G., Miller, S., & Minner, S. (1996). The Rural Special Education Project: A school-based program that prepares special educators for service in rural areas and to teach Native American students. Rural Special Education Quarterly, 15, 3-12.

Prater, G., Rezzonico, A., Pyron, R., Chischille, J., Arthur, V., & Yellowhair, B. (1995). Effective teachers: Perceptions of Native American students in rural areas. Proceedings of the American Council on Rural Special Education, 358-361.

Spuhler, L. (1989). Rural teacher education improvement project. Dillon, MT: Western Montana College.

ABOUT THE AUTHORS

Martha Brady is a national consultant in arts integration and has been an educator for 30 years. Currently on the faculty at Northern Arizona University, Martha is the author of three creative arts books and a cassette tape of songs for children.

Barbara Campbell is currently a sixth grade teacher at Christensen Elementary School in Flagstaff, Arizona. She began her teaching career in 1982 as a junior high special education teacher. In 1985, she accepted a sixth grade position at Christensen. In the fall of 1994, Barbara was selected as a teacher-on-loan to the Flagstaff Professional Partnership Program. During that time, she delivered content lessons, monitored classroom teaching and planning, and brought her recent classroom experience to pre-service teachers. She then returned to her sixth grade position during the fall of 1996. Barbara has also taught a long-distance Title 1 Math program and a math manipulatives series on video. Both of these teaching opportunities developed through a partnership with Northern Arizona University and Flagstaff Public School. She holds a B.S. in Special Education and a M.Ed. from Northern Arizona University.

MaryAnn Davies is an Associate Professor of Curriculum and Instruction at Northern Arizona University. She received a B.A. in social studies education from the University of Illinois; and her M.Ed. and Ed.D. from Virginia Polytechnic Institute and State University. Her ongoing interest in school-university partnerships includes teaching at a laboratory school, being a member of a site-based partnership, and currently collaboratively designing a three-year teacher preparation program that is site-based. She regularly writes, researches, and presents on a variety of topics related to educational improvement including brain-based teaching strategies, age-appropriate middle level education, school-based partnerships, and effective teacher characteristics.

Jeanne Dustman is an instructional specialist for the Flagstaff Professional Partnership Program who holds B.S. and M.S. degrees in elementary education from Northern Arizona University (NAU). An employee of NAU, she has worked in the Flagstaff School District since 1987 as a member of the instructional team for the Flagstaff Partnership Program. Diverse experiences in the elementary classroom as well as with university students in a traditional setting have enabled her to contribute to the development of this program. Her areas of research and teaching interests include reading, language arts, and science education.

Daniel L. Kain is an assistant professor of Instructional Leadership in the Center for Excellence in Education at Northern Arizona University. He is currently the lead faculty member of the Integrated Secondary Teacher Education Program (I-STEP) and the coordinator of the NAU Peace Corps Fellows Program. His research interests and professional publications center on interdisciplinary instruction, team teaching, problem-based learning, and school culture. A former middle school and high school teacher, he obtained his B.A. from Montana State University, his M.A. from the University of Washington, and a Ph. D. from the University of British Columbia.

Mary Knight is a Library Media Specialist at Christensen Elementary School in Flagstaff, Arizona. She received her B.S. and M.Ed. from Northern Arizona University. She served as a Flagstaff District teacher-on-loan to the NAU Professional Partnership in 1995-96 where she provided curriculum and educational technology instruction to pre-service teachers in an elementary setting. She has developed and instructed technology inservices to district faculties and held family technology workshops. She is currently working to provide elementary teachers with positive technology experiences to share with their students and student's families. She will also be teaching university courses in multi-media production, the internet as a learning tool, and multi-media resources for use in the classroom.

Sherry L. Markel is an Assistant Professor of Elementary Education in the Center for Excellence in Education at Northern Arizona University. She received her B.A. from Georgia State University and her M.Ed. and Ph.D. from University of Arizona. She taught at the elementary level in Tucson, Arizona for 10 years. Research interests include integration of technology in instruction and the development of practical knowledge in beginning teachers.

Susan Miller is a Professor of Special Education in the Center for Excellence in Education at Northern Arizona University. She received her Ph.D. in Special Education from the University of Missouri. She taught elementary and K-12 special education for 13 years in Missouri and Belgium. She was at the University of South Dakota for five years and has been at NAU since 1985. She was chair of Educational Specialties for eight years. For five years Dr. Miller has been the Principal Investigator of the Rural Special Education Project which is based in Kayenta, Arizona.

Sam Minner received his Ph.D. from the University of Arizona and his M.S. and B.S. from Southern Illinois University. In the last 15 years Dr. Minner has published one book, four book chapters, 90

BEST COPY AVAILABLE

journal articles, and four monographs. In addition, he has authored grants that have won over four million dollars.

Greg Prater is an Associate Professor of Educational Specialties and also serves as Coordinator of Research Services for the Center for Excellence in Education. He received his B.S. degree from the University of Southern Mississippi, M.A. and Ed.S degrees from Louisiana Tech University, and Ph.D. from the University of Alabama. Dr. Prater is very active in field-based teacher training programs, particularly on the Navajo Nation.

Peggy Raines is an Assistant Professor of secondary education at the Center for Excellence in Education at Northern Arizona University. She received her B.S., M.A., and Ph.D. from the University of Colorado at Boulder. She was a junior high school English teacher and administrator for many years in several front range communities in Colorado. She chaired the secondary education revision committee that designed and now has implemented the Integrated Secondary Teacher Education Program (I-STEP) at the Center for Excellence in Education. She is currently designing and will be teaching in a school-based cohort of I-STEP that is expected to be implemented in the Fall of 1997 in Sedona, Arizona.

Emilie Rodger is an Assistant Professor of Education at Northern Arizona University in Flagstaff. She received her M.A. Degree in Curriculum Development from Sonoma State University in 1978. She has taught in elementary schools for 22 years and started a multiage program in Gilbert, Arizona in 1990. She is currently teaching in the NAU/Sedona Partnership field-based teacher education program. She teaches courses in elementary school curriculum, children's literature, multiage philosophy, and language arts.

Michael Tanner is an Associate Professor in the Center for Excellence in Education at Northern Arizona University. He teaches high school methods and content area reading courses to undergraduates and teaches many of the graduate reading courses leading to an Arizona Reading Endorsement. He has served as chairman on three doctoral students' dissertations who have won national awards for outstanding dissertations from the Association for Supervision and Curriculum Development and the Association of Teacher Educators. He has also developed the NAU Science Teacher Preparation Program along with Drs. Gordon Johnson and Raymond Tamparri which won the Association for the Education of Teachers of Science's Innovations in the Pre-service Education of Teachers of Science award in 1994.

Peggy Ver Velde is a Professor of Instructional Leadership in the Center for Excellence in Education at Northern Arizona University. She earned her B.A. in Elementary Education, her M.A. in Special Education, and her Ed.D. in Elementary Education at the University of Arizona, with a minor in Early Childhood Education. In addition to international teaching experience, she has extensive teaching background in public schools, including special education. Before coming to NAU, she taught at the University of Northern Colorado. Since 1986, she has involved herself primarily with school-based teacher education, particularly the Flagstaff Professional Partnership. She has been awarded the Burlington Award and the NAU President's Award for outstanding teaching. Her school-based assignment has provided opportunities for a variety of applied research studies in the areas of children's early writing, gender equity in teaching, and the effects of multimedia technology production upon children's concept learning. Her major teaching interests are reading, language development, and children's literature.

Pat Wall is an Assistant Professor in the Center for Excellence in Education at Northern Arizona University. She holds a B.S., Ed.M, and Ed.D. from Oregon State University in Elementary Education with a specialty in Early Childhood. She was a teacher of primary students for 18 years in the Pacific Northwest and was a mathematics consultant for the Department of Defense International Schools for four years. She is currently teaching in the NAU/Sedona Partnership field-based teacher education program. Her areas of interest are mathematics, literacy, and children's literature.

BEST COPY AVAILABLE